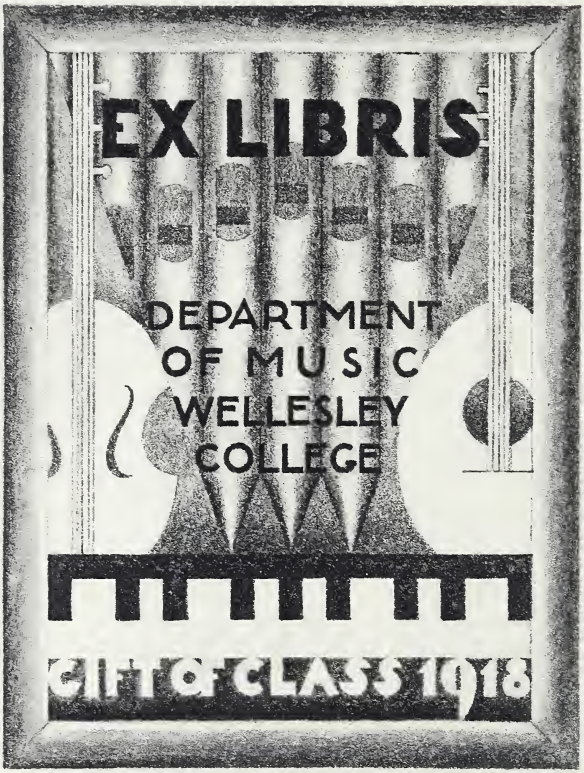
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SERIAL TECHNIQUES IN THE RECENT MUSIC OF IGOR STRAVINSKY

BY

DAVID WARD-STEINMAN

B.Mus., Florida State University, 1957
M.Mus., University of Illinois, 1958

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF DOCTOR OF MUSICAL ARTS
IN THE GRADUATE COLLEGE OF THE
UNIVERSITY OF ILLINOIS, 1961

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I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY SUPERVISION BY DAVID WARD-STEINMAN

ENTITLED SERIAL TECHNIQUES IN THE RECENT MUSIC OF IGOR STRAVINSKY

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INTRODUCTION

After the fin-de-siècle post-Romantic dilemma, music split into two broad streams--the out-and-out chromaticism of the Viennese school which continued the post-Romantic tradition, and the pandiatonic/polyharmonic school that broke with it. No man was more responsible for the break than Igor Stravinsky, who has become one of the chief bell-wethers of twentieth century music. Long considered diametrically opposed to the Schoenbergian school, when Stravinsky a few years ago was discovered to have adopted serial techniques, the musical world, for the most part, reacted with shock and incredulity on the one hand, and with cynicism and amusement on the other. Strangely, the most significant fact of all was generally overlooked, namely, that Stravinsky's serial music still sounded unmistakably like Stravinsky, and not at all like any of the serial music of the Viennese school. Moreover, it was still firmly grounded in tonality--a seeming contradiction in terms.

It is the purpose of this paper to investigate the above "paradox," to study Stravinsky's serial development in detail, to attempt to discover how he has been able to retain his own musical identity while working with a basically "alien" technique, and, finally, to delineate his

significant contributions to serial technique.

Beginning with the Cantata of 1952, Stravinsky's entire serial output to date will be analyzed and discussed in detail. Three pieces in this period are external to his serial development: the Greeting Prelude of 1955 for Pierre Monteux' birthday--a short, forty-five second setting of the song "Happy Birthday to You"--the J.S. Bach Chorale Variations of 1956, and the Gesualdo Monumentum of 1960--an exercise in orchestrating several of Gesualdo's madrigals in honor of his four-hundredth anniversary. It was felt that analyses of these pieces could be dispensed with, since they are peripheral to his principal output of this period.

CHAPTER I

TOWARD SERIALISM

Cantata

Igor Stravinsky's secular Cantata on anonymous fifteenth and sixteenth century lyrics was his first compositional project after the completion of The Rake's Progress, which has come to be regarded as the culmination of his neo-classic style. The Cantata, begun in April, 1951 and finished in August of the following year, marks a new direction for him, for it is in this piece that the experiments which were to lead him into the musical world of Schoenberg and Webern were begun.

The Cantata has been analyzed in considerable detail by Stravinsky himself in the program notes he supplied for the first performance. These notes were reprinted by Columbia Records to accompany their recording of the piece, and are, therefore, readily accessible.[1] The most significant aspects of the piece, however, have not been commented on, but with the advantage of hindsight we may proceed to examine them from the standpoint of serial technique, in view of Stravinsky's subsequent development.

The Cantata consists of seven movements arranged in the over-all pattern of a large rondo: A-B-A-C-A-D-A. The A's which interlace the piece in the scheme above are settings of four different verses of the "Lyke-Wake Dirge," set to essentially the

same music and scored for the same instruments--two flutes, oboe, English horn, cello, and three-part female chorus (the latter being employed only in the "Lyke-Wake" dirges). The B of the rondo pattern is a soprano solo that Stravinsky labels "Ricercar I." C is a tenor solo ("Ricercar II") and D is a duet for soprano and tenor ("Westron Wind"). For our purposes it is the two solo arias which are most interesting, for it is in these two songs that Stravinsky's serial experiments begin.

In calling the two solos Ricercars, Stravinsky means us to understand that they are compositions in canonic style rather than strict alla breve fugues,[2] which is what the term came to mean in the late Baroque period. Now a composition "in canonic style" is not necessarily a serial piece, though canon is certainly a serial technique.[3] But in the second Ricercar (the tenor solo) the theme is treated as a strict series rather than as an autonomous melody, which is to say that the various operations that are performed upon the "theme" are performed upon a strict sequence of notes rather than upon a melody with an autonomous rhythm and form. Though this "theme" is stated a total of thirty-seven times, only once is it repeated in exactly the same form; but in all thirty-seven statements (including transpositions) the original note/interval sequence, allowing for octave displacement, is maintained, and this is of course the essence of serial composition technique. The "theme" in this case is a strict series of eleven notes (of which six are different), stated in the first measure by the flutes and the

cello:

Ex. 1

This series is used melodically throughout, never vertically. Though there may be as many as three simultaneous (i.e. "vertical") statements of the series or its permutations, there are no serially derived chords as such since the serial expositions are always linear, and there are always one or more free parts in the accompaniment.

The formal organization of the song consists simply in the alternation of a series of cantus cancrizantes and canons with a short ritornello--the latter being never serially derived. There are eleven such binary pairs (cantus cancrizans or canon plus ritornello) in the song, and though the cantus cancrizantes and canons are always varied, the ritornelli, set to the same line of text, occur in only two forms, the second of which is used for the last nine statements of the ritornello. These nine are exactly alike, with no variation whatever. This lends a certain monotony to the piece, for any given cadence will sound stale after two or three repetitions, let alone nine. The cadence in this case (a transposed Phrygian one) becomes ultimately quite cloying.

A strophic string of eleven binary pairs is not in itself a very tight construction,[4] but there are underlying patterns of symmetry in Stravinsky's ordering of the series and its permutations which help to unify the song. Since these patterns have not been commented on by other writers, we might begin our study by investigating them--especially since they become a key part of Stravinsky's later serial technique.

If we let "O" stand for the original series of eleven notes, "I" for the inversion of the series, "R" for the retrograde[5] form, and "RI" for the retrograde of the inversion, the construction of the piece may be represented graphically with little difficulty. Normally transpositions are indicated by subscripts numbered from 1 to 12 representing the twelve notes of the chromatic scale, the original series being symbolized by "O_1"; the transpositions are counted upwards from the first note of the relevant prime form (i.e. O_1, I_1, R_1, or RI_1). In the Cantata, however, serial transpositions are of no structural significance, so they will not be indicated in the diagrams, capital letters without subscripts sufficing to identify the basic serial forms as they occur. Before proceeding, it should be mentioned that the term "inversion" has a restricted meaning in serial parlance: the notes that compose an interval aren't themselves inverted, but the interval itself is. For example, a major sixth won't invert to a minor third, but a major sixth up will invert to a major sixth down.

Cantus cancrizans:

Tenor: O R I RI

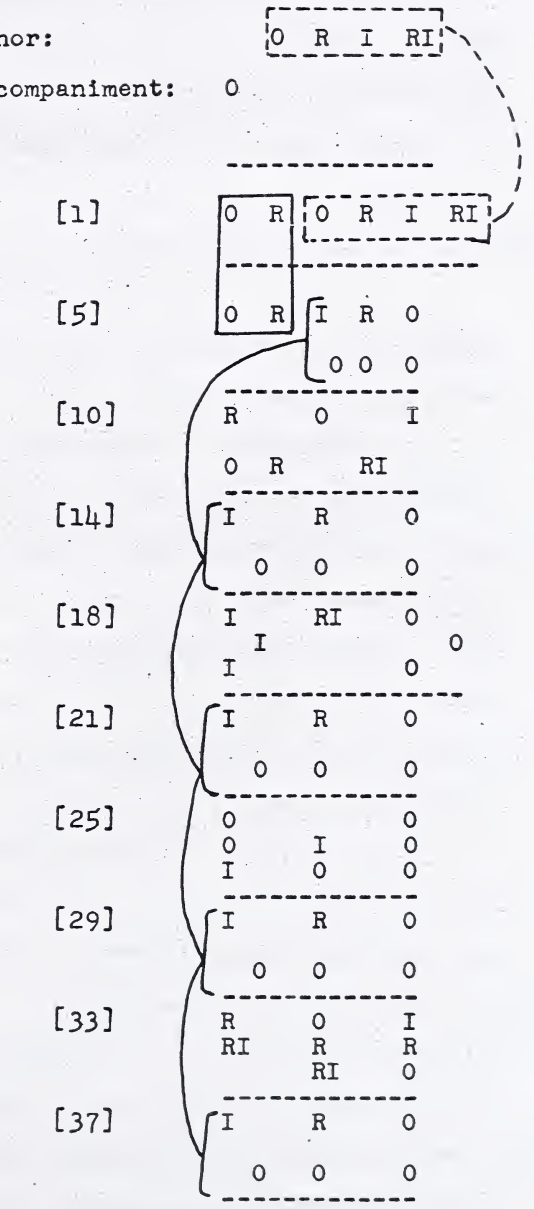
Accompaniment: O

Ritornello:

CC:

Rit.:

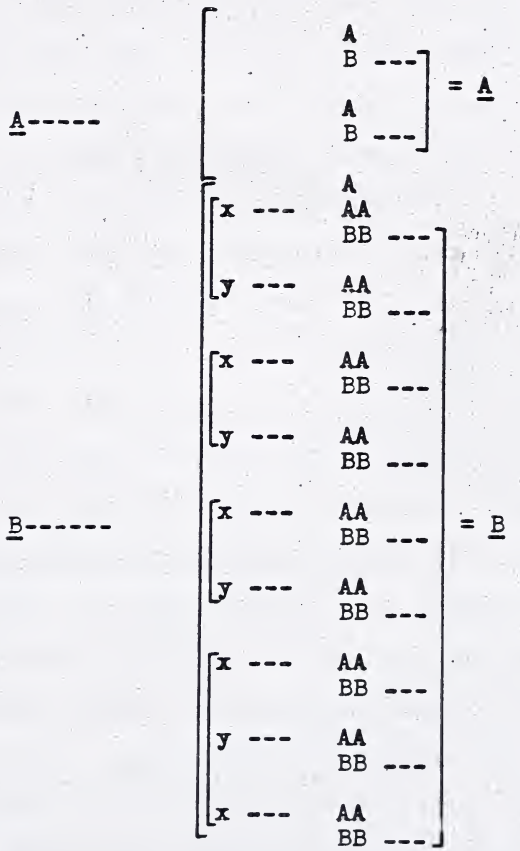
CC, Canon:



In the preceding diagram brackets enclose rehearsal numbers from the score. The non-serial ritornelli are symbolized by dashes. The first line in each group (i.e. that opposite the bracketed rehearsal numbers) represents the tenor solo; the second and/or third lines are a condensation of the accompanying parts.

Ignoring the ritornelli for the moment, if we examine the material containing the formal canons (bracketed by Stravinsky in the score, but unidentified as topermutation) it will be seen that there are two sub-patterns of essentially binary organization in addition to the over-all formal scheme of the eleven binary pairs of alternating canons and ritornelli. The most obvious of these sub-patterns begins at [6] in the score with the introduction of the first formal Canon. A binary sequence is formed by the repetition of a set serial structure (I-R-0/0-0-0) alternating with a free, constantly changing one. There are five statements of the recurrent form that alternate with four free ones, no two of which are alike. The second binary sub-pattern is, perhaps, more tenuous, but it is there none the less. Its strophe is formed by the three cantus cancrizantes, its antistrophe by the subsequent canons. The cantus cancrizantes differ in texture, instrumentation, and fioritura from the canons, which are much less florid (e.g. thirty-second notes abound in the cantus cancrizantes but are totally missing from the vocal part of the canons). Complementing this differentiation, the two ritornelli that alternate

with the cantus cancrizantes are distinct from the nine ritornelli that interlace the canons, even though the same line of text is used for both forms. Thus within the ritornelli a third instance of binary symmetry is found. These complex inter-relationships can be illustrated graphically:



In the diagram above:

A = Cantus Cancrizans
AA = Canon

B = 1st form of the Ritornello
BB = 2nd form of the Ritornello
x = Canons with recurring serial patterns
y = Canons with non-recurring serial patterns

A = 1st strophe of a large binary form
B = 2nd strophe of a large binary form

It is worth recalling that this movement, which is by far the longest and most complex, is the central movement of the Cantata--the keystone, as it were.

We may now examine briefly the second movement of the Cantata, the soprano solo (Ricercar I). Its serial scheme is much less ambitious than that of the tenor solo, but it is none the less interesting. The over-all form of the movement may be represented by the scheme A-B-A-B-A followed by a recitative and coda. The canons in this movement are not treated as mere notes-series, which was the case in the tenor solo (and which was serial technique, proper), but as autonomous entities preserving their distinct melodic and rhythmic shape. This movement, in other words, may be said to employ "classical" contrapuntal technique rather than twentieth century serial technique, where operations are performed upon a note sequence with plastic rhythm and form rather than upon a determinate, autonomous melody. Another difference between the two movements is in the proportion of strict (i.e. contrapuntally or serially controlled) material to free material: the tenor solo was rather dense serially, having usually three strict lines to one free one sounding simultaneously, whereas the soprano solo always has at least two free lines--even when

there are three simultaneous strict ones--and sometimes as many as four. The "serial" pattern of this song may be sketched in this way:

	O O' O I'	= A
[2]	O* I* O*	= B
[4]	O (no canons)	= A'
[5]	O* I* O*	= B
[6]	O O I	= A"
[7]	Recitative	
[8]	Coda	

In the outline above "O'" is a variant of "O," with one note changed; "O*" indicates a new "theme" entirely and a new series. The musical equivalents are given below for reference:

Ex. 2

It can be seen readily that only two forms of the theme (one hesitates to use the term "series" here in view of its connotations, though it is of course a series in reality) are used--the original and its inversion. Note the prominence of the central A which has no canons whatsoever. This distinguishing feature "weights" the center of the A-B-A-B-A pattern, as the tenor solo "weights" the center of the whole Cantata. Considered on one serial level, then, the alternating groups of canonic material and free material would permit a double-binary reading of the movement, i.e. canons, no canons, canons, recitative and coda (no canons). The correct musical interpretation, however, is obviously the former one, Stravinsky himself pointing out that the movement is essentially a rondo.[6]

Certain other technical features distinguish the canonic treatment of the two solo arias from each other. In the soprano solo just discussed the interesting thing about the canons is the rhythmic interval at which they occur. Canon at the eighth note, canon at the quarter note, and canon at the odd interval of the quarter note plus a sixteenth are relatively uncommon because of the difficulty of recognizing aurally a canon in such close quarters. These canons are, moreover, fairly strict rhythmically--a convention that would make little difference in the tenor solo because of the fact that the canonic themes have no autonomous rhythmic identity (they have, instead, a serial one). Another feature of the

soprano solo is that tonal adjustments in the canons are rather frequent; in the tenor solo the writer can find only one place in the canons where strict serial order is broken.[7] In neither of the pieces does transposition of the series play a significant structural part. Indications of transpositions were, therefore, omitted from the analytical charts of both movements.

It would have been interesting if the duet for soprano and tenor ("Westron Wind")--the D of the over-all rondo scheme of the Cantata--had paralleled the two solos with a serial or canonic plan of its own, but according to Stravinsky's design, "though it contains much imitation, it eschews in its sweep the formal canons of the other pieces."[8]

Septet

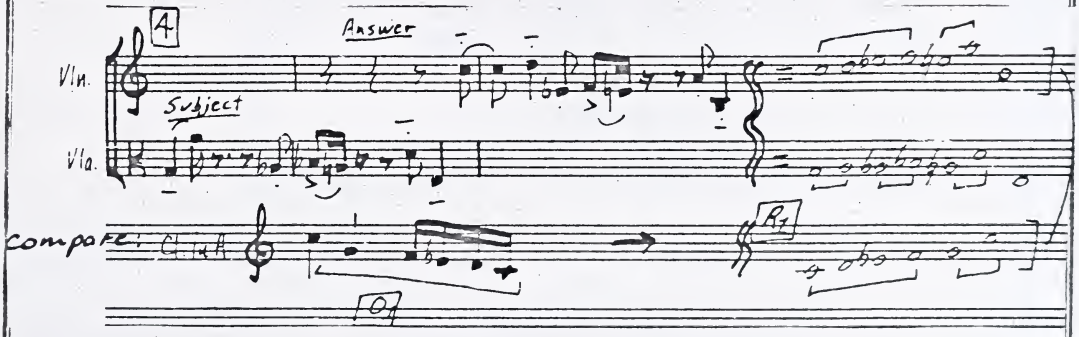
Stravinsky's Septet, according to one writer, is "remarkable as being the first work in which Stravinsky has employed the twelve-note system. . . . The result once again is pure Stravinsky, though not of the best vintage."[9] Actually Stravinsky does not yet employ the full "twelve-note" system, which implies total chromaticism: the second movement ("Passacaglia") is based on a sixteen-note row, but only eight of its notes are different.[10] What the writer should have said was that the Septet is remarkable as being the first work in which Stravinsky has employed consistently the serial system, and then only in the latter two movements.

The Septet was written between July, 1952 and February, 1953, but it was not performed until a year later. It is cast in three movements--a sonata allegro, a Passacaglia, and a Gigue (the latter two so titled in the score), and instrumented for clarinet, horn, bassoon, piano, violin, viola, and cello. The first movement, with its loose canons, resembles the soprano solo (Ricercar I) of the Cantata in compositional technique, though harmonically it is much more involved. The middle movement, the Passacaglia, is the most complex and serially-strict of the three, and in this respect it corresponds to the central tenor solo (Ricercar II) of the Cantata. The Gigue is a formal fugue in four sections, its main theme and contrasting themes being derived from the same sixteen notes that formed the passacaglia subject in the previous movement --all of which derive ultimately from a single melodic idea announced at the beginning of the first movement. The Gigue has no parallel in the Cantata. The generic material for the entire Septet is found in the first two bars of the piece:

Ex. 3

In the example quoted above it can be seen that the bassoon plays the augmentation of the main theme simultaneously with the clarinet's statement in the original form and the horn's augmentation of the inversion. The inversion of the theme is heard again in the tenth bar, played by the violin, but it is a tonal inversion rather than a real one. At number [4] a fugato begins which functions as the development section of the sonata allegro. Its theme probably is derived from the retrograde of the initial main theme, but it is a tonal retrograde, scarcely recognizable aurally because of octave displacement and changed rhythmic identity:

Ex. 4



This new rhythmic form does not govern all the entries in the fugato, however. In a number of instances the notes of the subject are treated freely as a series, and still newer forms of the subject emerge:

Ex. 5

The fugato concludes in a stret , utilizing all the instruments except piano. The recapitulation proper follows (at number [9] in the score), and is literal for the first seven measures. The secondary thematic group, instead of being transposed from the dominant to the tonic, is stated a step

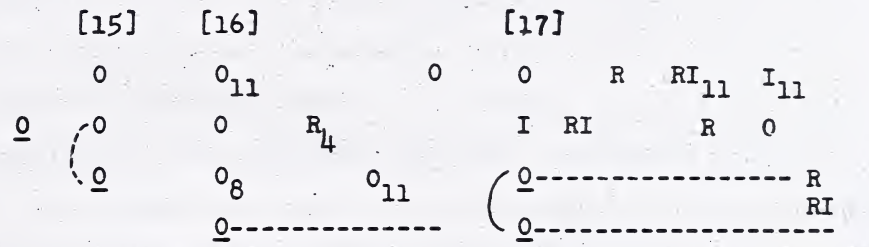
lower (i.e. in the sub-dominant) than it was in the exposition. The movement ends with a quiet coda that restates the opening, generic theme in free augmentation.

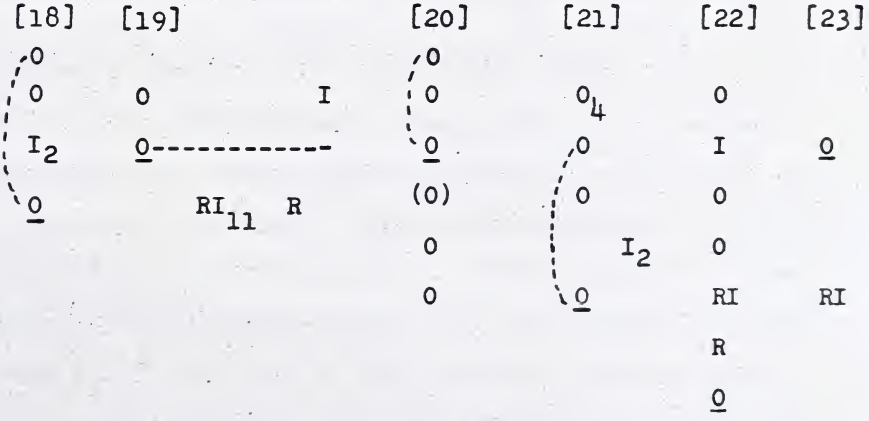
The first movement of the Septet resembles in many details the first movement of Stravinsky's earlier Dumbarton Oaks Concerto. But since these parallels have already been pointed out by Robert Craft[11] there is no need to go into them here.

The Passacaglia is a fairly strict serial composition based on a row of sixteen notes, eight of which are different. The first five notes of the series are a transposition of the first five notes of the opening movement's six-note theme. The first statement of the new series is split up among four instruments in the manner of a Klangfarbenmelodie. This exposition of the passacaglia theme resembles visually in striking detail the first page of the Webern Symphonie, Op. 21. Except for this and the very last statement of the series (which is also Webernian), the rest of the piece is pure Stravinsky despite the emphasis on Viennese-associated intervals --i.e. sevenths and ninths, especially major sevenths and minor ninths.

There are ten statements of the passacaglia theme as a true ground bass, which, as such, underlies nine variations. The theme is readily apparent despite octave displacements of various notes, for it preserves its rhythmic identity through the first eight statements. In three of the variations filler

counterpoint is introduced by the clarinet and bassoon (at numbers [15], [18], and [21]), joined by the horn at number [18]. All the rest of the piece is serially strict. The complete serial scheme is given below. Since there are relatively few serial transpositions in this movement, the subscript "1" will be omitted from the prime forms (i.e. $0 = 0_1$).





In the diagram above, vertical brackets indicate octave-doublings in rhythmically identical statements. Dotted brackets indicate rhythmic doublings (implying octave displacements in what would ordinarily be an octave-doubled line). In general, only complete statements of the series are listed. Rows that are divided up among several instruments are listed once if complete. Vertical spacing of the serial abbreviations refers roughly to their relative position in the printed score (which uses a conventional disposition of instruments except in the case of the horn, which is inserted between the clarinet and bassoon), not their position in the frequency spectrum. Rehearsal numbers in each case signal the start of a new variation. The O's that function as the passacaglia "theme" are underlined.

A number of interesting observations can be made even from a cursory examination of the preceding chart. Note, for example, the rarity of transpositions. More than four-fifths of the serial statements use a prime form rather than a transposition. Of the ten transposed statements that do occur, only four different transposition-intervals are employed, and two of these are "consonant." O_4 is the transposition to the minor third above, O_8 to the perfect fifth. The other transpositions are to the minor seventh (O_{11}) and the minor second (I_2). Only the O form has as many as three transpositions; the R, I, and RI forms have only one transposition each. The O's predominate by far, supplying about two-thirds of the serial

statements that occur.

The vertical bracketing, or, rather, the absence of it, will suggest the variety that Stravinsky is able to find in his material. At rehearsal numbers [16], [20], and [22], for example, he has contrived to have four different and distinct versions of O_1 sounding simultaneously. At [22], the penultimate variation, there are seven real contrapuntal parts, utilizing all four forms of the series simultaneously.

As in the Cantata, Stravinsky uses the series horizontally only--never vertically. But then there are no "chords" or harmonic fillers in this movement, all the parts being contrapuntally derived. Occasionally an instrument will punctuate or articulate the line of another. In these cases the particular instrument functions serially as an extension of the part it is high-lighting--if read horizontally its notes would make little serial sense. Take for example the viola at number [17]: its notes in these two bars belong to three different serial orders, viz. O (starting with the pizzicato F# just before [17]), I, and RI. The clarinet performs a similar function at the same place. Between [19] and [20] the four clarinet entries belong each to a different order--O, RI_{11}, R, and I--though here the notes are thematic rather than articulatory, filling in the series begun in the strings. In the bar after [19] the cello plays the first five notes of RI_{11}, the clarinet the next five, and the viola the last five.

For the sake of this pattern, apparently, Stravinsky permits a serial "error": the viola's notes from the sixteen-note series are #11, #12, #13, #14, #16. The missing #15, a G, comes in the next bar where it also functions as #5 in the retrograde series just begun by the cello. This would hardly be worthy of comment were it not for the fact that this is the only time something like this occurs in the entire Septet. This procedure becomes common practice, however, in the later Stravinsky serial pieces.

The Gigue, as we have mentioned, is a long fugue in four sections (actually four fugues, the second and fourth of which are double fugues) whose main subject is composed of exactly the same sixteen notes that formed the passacaglia subject in the previous movement (O_1). The theme is given a completely new rhythmic and, one might even say, melodic identity, providing the greatest possible contrast with its serial double in the Passacaglia. In Craft's felicitous phrase, "the derivation may not be determined aurally, yet will be if such things ever are."[12]

The "rows" that provide the source material for the Gigue are given by Stravinsky in cues at every entrance, but these are not serial rows. They are, rather, compressions of the sixteen-note series into scales of the eight different notes that comprise the series. These eight notes are confined within the limit of a major sixth. All subject entries in the

fugue, including permutations, use the complete sixteen-note series. At the conclusion of each subject entry filler counterpoints are used which are derived from the eight different notes of the series, but in random order. This explains Stravinsky's printing the eight-note rows in the score. Such an organization of the material is entirely consistent with traditional fugal procedure, if not with strict serial procedure.

The plan of the fugue is unusual. The first and third sections are scored only for strings, the second and fourth sections only for winds and piano. The two choirs thus obtained are combined only at cadences. The first fugue (for strings) is repeated almost exactly by the piano in the second fugue (beginning at number [32]) while the winds simultaneously expose a contrasting subject, drawn again out of the same, protean sixteen-note series. In these two fugues, which comprise half of the movement, only the original form of the series is employed, though three transpositions are admitted. The third fugue is built on the inversion of the first subject transposed up a step. Two of the seven entries are O forms, however.

The final fugue parallels the second fugue. The piano repeats note-for-note the inversion fugue of the strings that just ended, while the winds introduce still another contrasting subject, based on the inversion of the theme presented earlier by the winds, but still distinct from it. In this final fugue the retrograde inversion is heard only once (transposed up a fourth), and the retrograde form is not used at all.

The final stretto states simultaneously the O_6, O_1, O_8, I_{11}, and I_{10} forms of the series. The movement cadences on a complex chord formed by the superposition of three perfect fifths (C#-G#, D-A, and E-B) over an A major chord in first inversion. This can be considered as an E dominant-seventh chord in juxtaposition with its resolution, the tonic A major (which was also clearly the tonic key of the first two movements).

In the following serial analysis of the Gigue a dotted line is used to separate the winds from the piano, symbolizing the autonomous differentiation in their material even though identical serial orders may be used.

[24]

Violin: O_8 O_3

Viola: O_1 O_8

Cello: O_1 O_6

---

[32] [36]

Clar.: O_1 O_1

Horn: O_8 O_6

Bsn.: O_1 O_{11}

Piano: O_1 O_8 O_1 O_8 O_6 O_3

---

	[40]		[44]	[47]
Violin:		I_8	I_3	I_{10}
Viola:	I_3		O_8	
Cello:		I_3 O_8		

	[50]			[54]		[58]	
Clar.:		I_6	RI_6			O_6	
Horn:	I_{11}						I_{11}
Bsn.:				O_{11}		O_1	
Piano:	I_3 I_8		I_3		O_8 I_3	O_8	I_{10}

It should now be clear that the Septet was the most tightly constructed piece that Stravinsky had written up to that time. In no previous work did he attempt to construct three movements from source material provided by a single, Protean germ cell. The economy of means employed in the Septet is in marked contrast to the casually serial sections of the Cantata which, nevertheless, stands as a logical predecessor to the Septet.

Critical reaction to the piece was, in general, unfavorable, but then this was the usual response to Stravinsky's

celebrated about-faces. Two brief quotes may be taken as representative:

> The work is . . . severely contrapuntal, . . . the Passacaglia and Gigue particularly so. It is these latter movements, however, which offer most musical relief after the formidably dry Sonata Allegro. . . . [The Septet] leaves the impression of a transitional work.[13]

> Stravinsky's Septet, however, leaves us wondering whether intellect is the composer's strongpoint, whether in fact he has been neglecting his true talents to concentrate on a style which others can handle as well if not better than he.[14]

Robert Craft, grasping the bull by the horns, deals directly with the event of Stravinsky's serial tendency:

> Now though Stravinsky's use of tone rows in the Septet may have proceeded from the example of Schönberg and Webern it does not tend toward their kind of twelve-tone atonality. But whereas in the Cantata (1952) harmonic movement is restricted to safely Copernican revolutions around strong tonal centers, in this gigue the vertical aspects of tonality are made to function with a more radical latitude than ever before in Stravinsky's art.[15]

Craft's statement about the Gigue, however, is questionable, for that is more firmly rooted in tonality than much of Stravinsky's previous oeuvre. Each of the subjects in the four expositions is answered solidly at the fifth, again affirming the tonal organization of the piece. And "the vertical aspects of tonality" are unquestionably less "radical" than, say, Le sacre du printemps, to choose the most obvious example. No, the Septet still bears the Stravinskyan stamp, in spite of its novel (for Stravinsky) method of construction.

Three Songs from William Shakespeare

In a recent issue of Tempo, an English music journal, Colin Mason wrote, somewhat whimsically, that

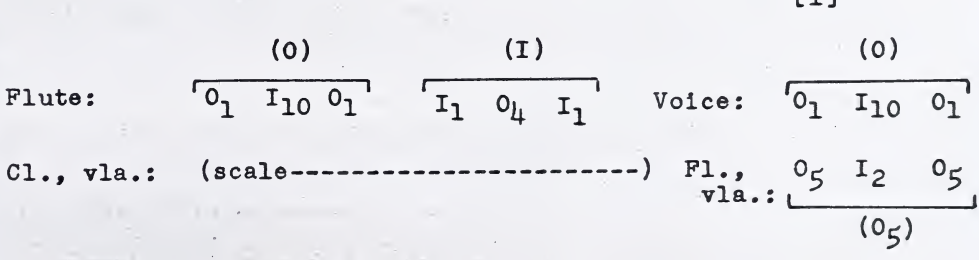
> the Cantata . . . points, in its canonic technique, toward Stravinsky's new serial methods, which he continued for some time to try to smuggle in unnoticed in the guise of canons, fugues, and other traditional forms that are by nature "serial."[16]

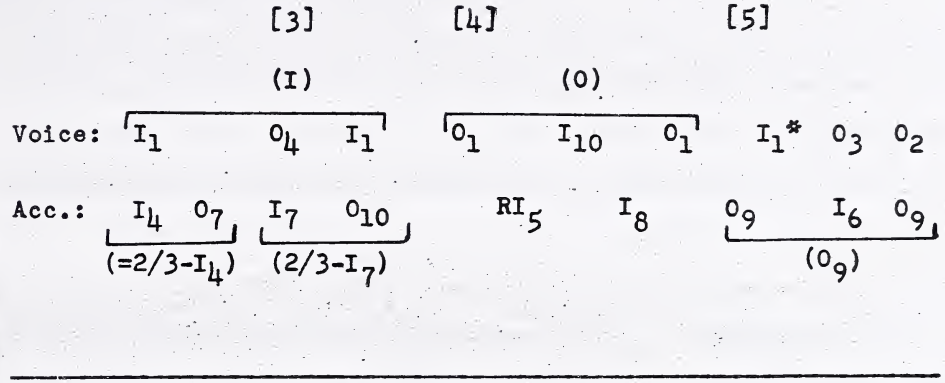
Continuing in this vein, Mason notes that "in the Passacaglia of the Septet Stravinsky comes nearest to true serial writing," but that the Three Shakespeare Songs and the In Memoriam Dylan Thomas are really "serial writing proper, abandoning the disguise (though not the pretence) of canonic writing." Stravinsky establishes tonality, in Mason's opinion, "by confining serial melody to a clear diatonic scale, or by bringing the music to rest periodically on a rather arbitrary tonic 'harmony.'"

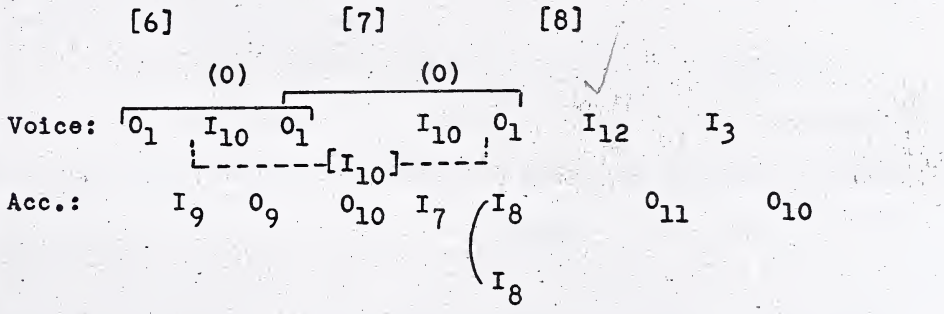
Mason's remarks, though appropriate enough for the In Memoriam, are premature for the Three Shakespeare Songs, which are far from being totally serialized. Nevertheless, the use of serial technique in the Songs does represent a greater control and awareness of serial potentialities than did the Septet. But, more important, the Shakespeare Songs simply happen to be better music than the Septet, no matter what the compositional techniques were.

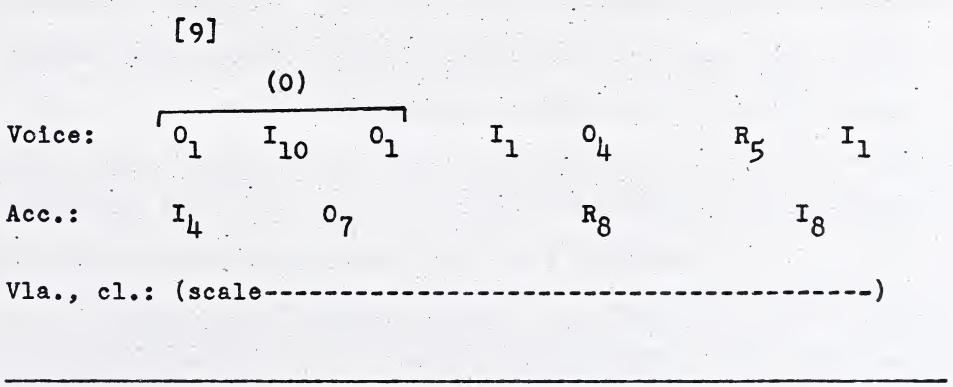
Surprisingly enough, the first song of the cycle, "Musick to heare," has been very carelessly analyzed by a number

of writers. The bone of contention is, of all things, the correct identification of the basic series on which the piece is built. Robert Craft,[17] Roman Vlad,[18] and Lawrence Morton[19] all profess it to be a series of twelve notes--the first twelve played by the flute, six of which are different. But they could not have looked beyond the first page-and-a-half of the score, for this analysis quickly breaks down. The basic series has to be shorter than that if the song is not to be dotted with inexplicable serial lacunae. Nor can the original series be a six-note or three-note one, as others have claimed. All these interpretations leave more questions unanswered than they answer themselves. The only logical choice for the basic series is the first <u>four</u> notes played by the flute: this is the only constructive unit that can account for every note in the serial part of the song (which includes everything but part of the accompaniment in the very opening and closing bars, where a diatonic scale from C to G is iterated to emphasize the C major tonality. A study of the complete serial plan of the song, with over-lapping interpretations indicated in parentheses and brackets, will help clarify the problem:




[3]
[4]
[5]
(I)
(0)
Voice: I1 04 I1
01 I10 01
I1* 03 02
Acc.: I4 07 I7 010
RI5 I8
09 I6 09
(=2/3-I4) (2/3-I7)
(09)


[6]
[7]
[8]
(0)
(0)
Voice: 01 I10 01 I10 01 I12 I3
[I10]
Acc.: I9 09 010 I7 I8 011 010
I8


[9]
(0)
Voice: 01 I10 01 I1 04 R5 I1
Acc.: I4 07 R8 I8
Vla., cl.: (scale----------)

What Craft and Vlad call O_1 is in reality $O_1 + I_{10} + O_1$. The larger grouping will fit the vocal part for the first half of the song (up to number [5]) and the instrumental accompaniment for the first entry, but after that it fits poorly or not at all. About all that can be said for any other interpretation (e.g. the hexachordal one) is that the second three notes the flute plays at the beginning happen to be a transposed retrograde form of the first three. But one can hardly analyze the entire song on this basis.

The great number of transpositions is noteworthy. Stravinsky employs all but three of the possible transpositions of the basic series and all but two of the possible transpositions of the inversion. The Septet, it will be remembered, used only four transpositions each of the O and I forms of the eleven available. The R and RI forms are again neglected in "Musick to heare." There are two statements of the retrograde (R_5 and R_8) and one of the retrograde inversion (RI_5). The reason may be that the Septet's series was four times longer than that of the first Shakespeare song, and therefore rather unwieldy; but that doesn't explain Stravinsky's predilection for the O and I forms over the R and RI forms.

There is one serial "error" in the piece: the bar after number [5] contains an inversion (marked I* in the chart) with the serial order #4-#2-#3-#1. (This could also be considered a retrograde inversion with the order #1-#3-#2-#4.) None of

the other serial interpretations can account for this. Mason dismisses it as a slip.[20] Craft is no doubt nearer the truth in associating it with the text that occurs at this point--"offend thine eare"--even though the underlay is not exact.

Stravinsky's use of the diatonically filled in fifth C-G presumably to emphasize the tonality is interesting because of the frequent octave displacements, which unify it with the rest of the piece but also serve to disguise aurally its basically simple origin. He has composed with small cells of notes before--long before his current serial period, in fact[21]--but the technique was always obvious because he eschewed the camouflaging device of octave displacement.

It should be noted that the cadences in this song follow the text closely. The rows, however, function independently of the text--both in the voice and in the accompanying instruments. Only occasionally do the rows end at a cadence point. Serial manipulations, then, are obviously secondary to the harmonic organization of the song.

The second song, "Full fadom five," is rich in color. The text with its "ding dong dings" invites bell effects, and Stravinsky does not decline the invitation. Serially this movement is less complex than its predecessor, but it is perhaps of more musical interest. The song opens with an eight-note bell evocation sounded in canon at the octave and fifth and, at the same time, in diminution and double diminution. Craft and Vlad both claim this series to be the basic one, but

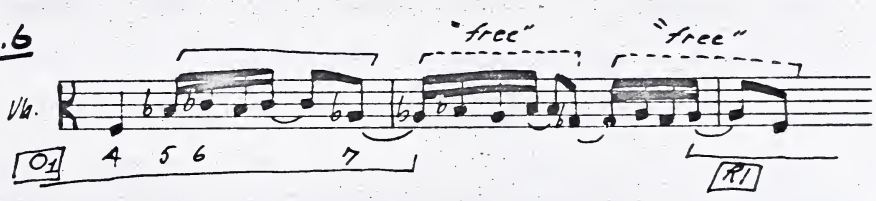
they are as careless in their analysis of this song as they were in the previous one. The true series used in construction of "Full fadom five" begins at number [1] in the score immediately after the bell-canon introduction. This is a series of seven notes, all of which are found in the opening bell motive, but in this order: #3, #4 (or #6, these two being identical), #8, #1, #2, #7, #5. Since the opening order never recurs, for all practical purposes we might as well consider the second set the definitive one, and treat the introduction along with the coda (which contains no serial references whatever) as basically free material. The serial scheme, then, beginning at number [1], is:

	[1]			[2]			
Voice:	O_1		R_1		I_1		
Flute:		R_{11}		O_1		R_8	
Clar.:	RI_{11}	I_1		x - x' [see note]		I_1	[seq.]
Viola:	O_1		O_6	[seq.]	O_1		[seq.]

	[3]				[4]
Voice:	RI_{11}	O_1	I_1		
Flute:		O_1		R_1	
Clar.:	O_{10}		R_1		Coda
Viola:	RI_1			R_6 (incomplete)	

In the bar before [2], "x" and "x'" appear to be taken from the series used in the first song. The first four notes of this measure are equivalent to the RI_7 form from that song; the third through sixth notes (overlapping two) are an altered O_{11} (the second note is a half step too low). At the end of the second bar before [2] in the viola, and in the first and second bars after [2] in the clarinet and viola, free sequences are introduced which were derived originally from the last three notes in O_1 and I_1, though the sequences themselves are serially free:

Ex. 6



In the bar before [3], the end of RI_{11} and the beginning of O_1 in the voice part overlap two notes. The incomplete R_6 which follows three measures later in the viola lacks its sixth note, a Gb. Its first note is also missing, but can be borrowed from #4 in the I series above which is the same note (Db) and immediately precedes #2 and #3 in the R_6 series vertically.

The last note in the voice part before the coda proper (at number [4]), a Cb, does not belong to the preceding order but stands alone. Although serial orders can be picked helter-skelter out of the two instrumental bars before number [4],

there seems little point in doing so, since this was most probably intended as just free counterpoint. Certainly this is the case in the coda proper, which begins at [4].

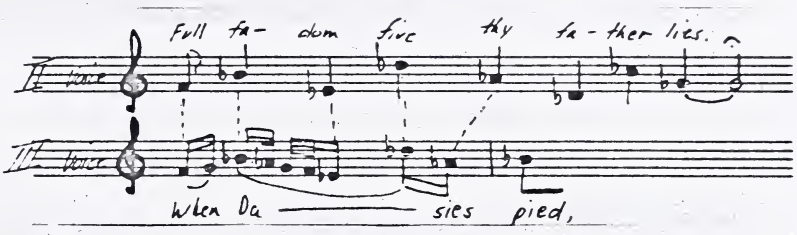
If there is still any doubt about the correct identification of the basic series, a study of the vocal line from [1] to [3] should dispel it. The seven notes in the first two bars that we have labelled the basic series, O_1, are immediately retrograded in the next two bars, the rhythm along with them (except for the last two notes, which are off-set by the interval of an eighth-note). At number [2] the theme is inverted, after which the inversion is retrograded (two bars before [3]), though here transposed down a step (RI_{11}). Thus the four basic forms are presented in order by the most important musical line--the voice. Three of the four are primes, with only the retrograde inversion being transposed.

The last song in the cycle, "When Dasies pied," is serially the freest of the three. In fact, only the vocal part is serially ordered, and its construction resembles that of the episodes in the Gigue of the Septet, whose material came from a loose "row" (Stravinsky's term) of notes rather than the strict series which governed all the fugal entries.

The basic series of this song is found in the first measure of the vocal part, overlapping one note into the next measure. It will be readily seen that these ten notes are formed by simply filling in diatonically some of the intervals between the first five notes of the introductory bell

motive from the previous song:

Ex. 7



Subsequent entries reduce these ten notes to seven or expand them to as many as seventeen, but in all cases these are still derived from the skeletal five-note bell echo.

The serial plan of the vocal part is relatively simple. The first statement of the series is followed by its retrograde, which repeats three notes and adds three new ones. The last note of R_1 becomes the first note of O_1, and a condensed form--the basic seven notes--of that series follows, wnich, in turn, is answered by its own retrograde. At this point (the third measure after [1]) a very free form of the inversion occurs, which is followed by its retrograde. Both of these are transposed up a fifth from the original series. At number [2] the O-R sequence is repeated. The serial form thus far--O-R, O-R, I-RI, O-R--produces a recapitulation-bar form (Reprisenbar): A-A-B-A. The next nine bars have no discernible serial derivation. Portions of the accompaniment

form diatonic scale segments reminiscent of the introduction and coda of the first song. Beginning four bars before [5] the entire song is recapitulated note for note, but set to a new text. There is a concluding coda of new material--a flute solo over a clarinet open-fifth tremolo--that recalls a similar passage at the conclusion of the first song in a much earlier piece of Stravinsky's--the Pribaoutki of 1914. (The clarinet open-fifth tremolo is apparently a favorite device of Stravinsky's: it accompanies the entire first song of the 1916 Berceuses du chat.)

The over-all form of "When Dasies pied" is binary. The serial form could be considered as double binary, with the serial recap-bar group (A) balancing a freely-composed section (B).

Each of the three songs in this group can now be seen to demonstrate different aspects of serial construction. The first song, "Musick to heare," is almost totally serialized, and is built on a tiny cell of four notes. The second song, "Full fadom five," uses a basic series of seven notes and permits non-serial sequences (but of serially-derived origins) to enrich the musical texture. Only the coda of this song is really "free," if one considers the introduction to be serially constructed. Mention should be made of the peculiar bell-like qualities of the intervals of this series: minor sevenths, perfect fifths and fourths (which predominate) can be wonderfully resonant when properly treated, and this is

no doubt why Stravinsky chose them, their ictal propensities being ideally suited to the text. The last of the three songs, "When Dasies pied," is, as we have seen, the freest of all in construction. Its "series," such as it is, derives from the bell-series of the previous song. One should note also that the viola's part is almost entirely confined to perfect fourths in harmonics--an echo of the first three notes of the introductory series (with the third note transposed up an octave) of the second song. Recalling the brief quotes of the first song's series that appeared as intercalations, as it were, in the second song, it will now be seen that the three songs are very closely and subtly related to each other. They even appear to share the same tonality: the first song is very clearly in C, the second song ends on a C (though its over-all tonality seems to be F), and the third song ends on the unresolved upper leading tone to C: Db (though this may be stretching the analysis somewhat). Though certain details of the analysis may be open to question, there is little doubt that the essential unity and inter-dependence of the three songs can be clearly seen and heard.

FOOTNOTES TO CHAPTER I

1. Igor Stravinsky, Notes for Columbia Recording ML-4899, Cantata (1952) [Stravinsky].

2. Ibid.

3. The three basic serial operations are the retrograding, inverting, and retrograde-inverting of a given serial order --all traditional procedures in canonic writing. The chief contribution of twentieth century serial practice is the emancipation of the series from the need of maintaining a perceptible autonomous rhythmic and melodic form--in effect freeing the series to function as a malleable building block, while at the same time assuring unity of a high order.
"Classical" canonic technique is frequently combined with twentieth-century serial technique, as in, for example, the Webern Symphonie, Op. 21, of 1928 (Vienna: Universal Edition, 1929).

4. Cf. Benjamin Britten's "There Is No Rose" from his Ceremony of Carols (London: Boosey & Hawkes, 1942)--a similarly constructed piece, but a much tighter one, since only five binary pairs are employed.

5. Cancrizans, crab, and riversion are all synonyms for retrograde meaning "backwards."

6. Stravinsky, loc. cit.

7. One note is added to the tenor part one bar after [8], filling in a major third.

8. Stravinsky, loc. cit.

9. "Editorial Notes," The Strad, LXV (July, 1954), No. 771, p. 67.

10. Cf. the series in the tenor solo of the Cantata, which has five duplications in its eleven-note row (i.e. only six notes are different).

11. Robert Craft, Notes for Columbia Recording ML-5107, Stravinsky Chamber Works 1911-1954.

12. Ibid.

13. Donald Mitchell, "Some First Performances," The Musical Times, No. 95 (July, 1954), p. 381.

14. "Editorial Notes," The Strad, loc. cit.

15. Craft, loc. cit.

16. Colin Mason, "Strawinsky's [sic] Contribution to Chamber Music," Tempo, No. 43 (Spring, 1957), p. 8.

17. Craft, loc. cit.

18. Roman Vlad, Storia della Dodecafonia (Milan: Edizioni Suvini Zerboni, 1958), p. 165.

19. Lawrence Morton, "Current Chronicle," Musical Quarterly, XL, No. 4 (October, 1954), pp. 572-75.

20. Mason, op. cit.

21. Cf. the first movement of Stravinsky's Trois pièces pour quatuor à cordes of 1914 (Berlin: Russischer Musikverlag, 1922): the entire 1st Violin part is composed from the four notes filling in the diatonic fourth G-C above middle C, the 2nd Violin part uses only the notes F#, E, D#, and C# (always in that order) plus a D at the very beginning and end, the viola has only two notes in the entire movement (C# and D), and the cello is confined to the notes Eb, Db, and C. A similar technique is employed in a later group of children's piano pieces, The Five Fingers, subtitled "Eight Very Easy Melodies on Five Notes" (London: J. & W. Chester, 1922). It could be argued that the melodies in this piece were limited to five notes so that the hand wouldn't have to be moved, but in actual practice the hand would be shifted anyway (one doesn't play repeated notes with the fifth finger, as would be necessary were the hand to remain fixed), and one is obliged to admit that there were compositional reasons as well as "practical" ones for the exercise of "composing with five notes." (As a matter of fact, Stravinsky exceeds this self-imposed five-note limit from time to time.)

CHAPTER II

TOTAL NON-DODECAPHONIC SERIALISM

In Memoriam Dylan Thomas

In Memoriam consists of a Prelude and Postlude of antiphonal dirge-canons (Stravinsky's term) for four trombones and string quartet, and a song for tenor voice and string quartet--a setting of Thomas' poem "Do Not Go Gentle Into That Good Night." It is the first piece of Stravinsky's that is entirely serially composed, from first note to last.

Analysis is facilitated by Stravinsky's idea of marking the series and its permutations with brackets in the trombone parts of the Prelude. Surprisingly, this has been criticized by some writers on the grounds that it suggests that the piece is nothing more than a musical puzzle with the key supplied. What bothers these people, one ventures to guess, is not that Stravinsky's piece may or may not be a puzzle, but the simple fact that the key is supplied, thereby threatening possible unemployment for the professional theorist and analyst. Apparently it would never do to let the average musician in on the inner secrets of the trade. Stravinsky himself, unfortunately, was so intimidated by the uproar that he subsequently felt obliged to disown the "key," claiming, according

to an editorial footnote in an article by Hans Keller,[1] that the serial identifications were intended for his use only, and that they were inadvertently left in the proofs--this in spite of the fact that similar markings occur in the Cantata and Septet. These latter were not specific enough to be of much help, though, and that is probably why they were allowed to pass unscathed. Polemics aside, the markings still stand, and they do provide a convenient starting point.

The "theme," which is the subject of all three movements, is a series of five notes--E, Eb, C, C#, and D--that form a cell by filling in the major third C-E. Two overlapping transpositions (E-G#, Ab-C) produce the remaining notes of the chromatic scale, dividing the octave into major thirds. The cell itself is autonomous, however, and there is no attempt whatever to systematically use up the other notes of the chromatic scale.

With this information and Stravinsky's guides at hand, analysis of the Prelude and Postlude poses no problems. With the song we are again fortunate, for it is the only Stravinsky serial piece that has been analyzed in any great detail in print to date. Keller has had the entire song reprinted in Tempo with his analysis pencilled in.[2] This is well worth consulting, for every serial statement save one is indicated.[3] Good as Keller's analysis is, it leaves many things unsaid. There is no discussion of the formal or structural organization of the piece, for example, nor is there any harmonic

analysis. Neither are serial transpositions indicated. But by identifying every serial form in the song, Keller intended his article

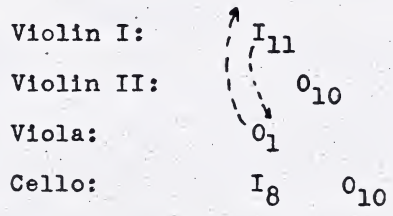
> to give a concrete idea of the nature of serial technique itself. Stravinsky's canonic masterpiece is more suitable for this purpose than any work of Schoenberg's, because it applies the method far more strictly and, at the same time, more simply, primitively (no evaluation, this!) than Schoenberg's music ever did; besides the application is only melodic, not harmonic, which makes things simpler for a start, since the harmonic aspect of a serial technique is its most problematic. In most other respects, Stravinsky out Schoenbergs Schoenberg, even though his is a five-note row which functions in a vaguely tonal fashion. The tonality of the piece would not, however, be enough to hold it together; in fact, some of Schoenberg's twelve-note music is more tonal than this piece. Nevertheless, since he does not, in principle, care about atonality, Stravinsky disregards one single serial directive, namely what Schoenberg calls "avoidance of doubling in octaves."[4]

If the song is examined closely, it will be seen that there are two ritornello groups that recur throughout the movement. The first occurs at the very beginning and occupies two and a quarter measures. It is composed of the following serial orders:

Violin I:	O_1	
Violin II:		O_{10}
Viola:	I_{11}	
Cello:	I_8	O_{10}

There are seven statements of this complex in the song. All are given by the string quartet alone except for the penultimate

statement (after the fermata in the bar before number [10]) where the tenor voice doubles the cello (I_8, O_{10}) an octave higher in a smoothed-out version of the cello line. The last two bars of the song contain the final statement of the ritornello, but in a rearranged order:



The seven statements of this ritornello, though serially identical, all take varied rhythmic forms, with octave displacements providing even more variety. There is not so much variety, however, that the ritornello cannot be recognized aurally and musically when it occurs.

The second ritornello-group functions in a different way from the first, yet the two are complementary. Ritornello A is a purely musical element, while Ritornello B points up a textual refrain ("Rage, rage against the dying of the light"). Ritornello B is composed principally of the O_{12} form of the series, and is rhythmically a rough diminution of the O_1 form of the first ritornello. The O_{12} is stated by the entire quartet--completely by the first violin and cello, partially by the inner instruments. Superimposed on this, the voice sings the inversion (I_{12}) of this motive, though with a new rhythmic identity. This structure occurs four times in the

song, and each time it precedes a statement of the first ritornello, to which it is joined by three serial orders (each time the same) that emerge from the O_{12} complex:

			[2]
	Ritornello B		Ritornello A
Tenor:	I_{12}	R_1----------	
Vln. I:	O_{12}		O_1
Vln. II:	---		O_{10}
Vla.:	--- RI_2----------		O_{11}
Cello:	O_{12} RI_8----------		I_8 O_{10}

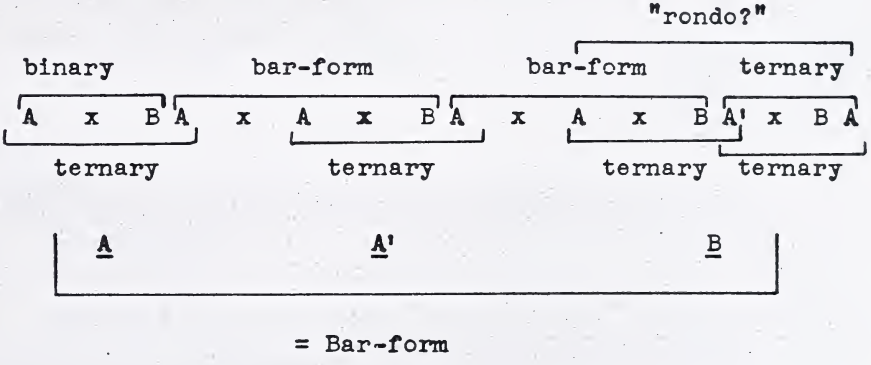
The inter-relationship of the ritornelli can be indicated in this fashion, using dashes to signify extraneous[5] material:

A ---- BA ---- A ---- BA ---- A ---- BA ---- BA

It should be kept in mind, however, that Ritornello A functions as an interlude between lines of text, whereas Ritornello B always accompanies a textual refrain; the former, therefore, points up the ends of lines, the latter the beginnings.

The constructive technique indicated by the plan of the ritornelli above recalls the tenor solo in the Cantata discussed earlier. It is obvious that the ritornelli provide the skeletal

framework for the entire piece, just as they did in the central Cantata movement, Ricercar II. The pattern "A ---- BA" is essentially a ternary one, but because A functions as an interlude preparing a new line of text it may be more correct to regard the plan as a binary form followed by a bar-form, e.g. A ---- B, A ---- A ---- B. The conflicting interpretations may be represented graphically, using x's to symbolize the constantly varied non-ritornello material:



What is important above is not necessarily the resolution of the conflicting analyses, but rather the acceptance of the fact of the structural significance of the two ritornelli.

A study of the material between the ritornelli does not demonstrate any systematic serial approach. The I and RI forms appear to predominate, but this does not seem to be of any special significance. Nor do the transpositions seem to be important. Both the inversion and the retrograde inversion appear in ten of their twelve possible forms, the retrograde

in eight. Strangely enough, the original form--O_1--is transposed least of all. Six possible transpositions are ignored. This may be of serial interest, but it is of little musical interest (the two do not necessarily coincide). Stravinsky is not at all concerned with total serial organization.

The dirge-canon Postlude is a kind of mirror-image of the dirge-canon Prelude. Both pieces consist of antiphonal strophes between the trombone quartet and the string quartet, but the material each group plays is reversed in the Postlude. To consider the Prelude first, if we assign different letters to the different strophes we can represent its form in this manner:

Trombones:	a	c	d
Strings:	b	b	

Using the same letter values to represent similar material, the Postlude can be graphed in like fashion:

Trombones:	b	b	b
Strings:	c'	a'	

[C' and a' are transposed down a step from c and a.]

The symmetry of this arrangement is self-evident.

The tonal organization of the complete In Memoriam is very interesting. The Prelude is clearly in E major, the Postlude in C major because of the shifting emphasis of the ritornello (labelled "b" above) which is in C. In the song, the predominant sonority (occurring at the beginning and at the end of Ritornello A) is the chord B-D-E, the B occurring always in the bass (i.e. the cello)--sometimes doubled, sometimes not--but invariably the most important note of the structure.

In the harmonic outline that follows, note that all the important tonal centers (B, C, D, E) are confined within the interval of a perfect fourth. If we consider the B of the song as a leading tone, then the interval is reduced to a major third--the same major third that encompasses the generic five-note series on which the piece is built.

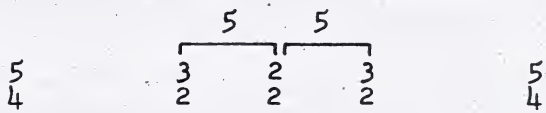
The following analysis, based on the assumed tonality of C (for that is where the piece ends), is not entirely convincing. If the Postlude had been in E major rather than C, a much more convincing interpretation of the over-all tonal scheme could have been given. (The B of the song, for example, would then function perfectly as a dominant.) But the music must be analyzed as it is, not as we would have it be for the mere sake of a more logical analysis.

PRELUDE			SONG	POSTLUDE		
(E maj.) [Fb maj.]	(E min.)	(E maj.)	(E)	-------(C major)-------		
a	c	d	(D)	b	b	b
b	b		B	c'	a'	
(C maj.)	(C maj.)			(D min.)	(D maj.)	

PREDOMINANT TONALITY:	E	B	C
Secondary tonality:	(C)	(E-D)	D

Harmonic analysis in C major:	III	$III_{\frac{4}{3}}$	I
	$[I_6]$	[VII]	

Attention should be called to the metrical scheme of the dirge-canons. The pulse is in units of five:



Note the symmetry of the arrangement with its reversal in the Postlude. The emphasis on five is no doubt a direct reflection of the five notes of the basic "theme," to use Stravinsky's term.

In Memoriam Dylan Thomas was the most tightly organized piece that Stravinsky had ever written up to that time --tighter even than the Septet. Every note can be serially accounted for, contrary to Goldman's exception in the Musical Quarterly.[6] In Memoriam is the logical culmination of the serial direction begun in the Cantata three years before. Each of the intervening works explored new aspects of serial composition for Stravinsky, and each added to his development as a serial composer. From now on Stravinsky abandons his experiments with short rows and turns to complete, twelve-tone serialism. But the steps are again gradual ones, and Stravinsky's development, as we shall see, is completely logical. So far, he had not attempted to use the series vertically, but now he begins to explore these possibilities as well.

Although the critical reception of In Memoriam was not, on the whole, favorable, the piece has found its staunch defenders. Hans Keller, for one, considers this piece "Stravinsky's greatest and most perfect since the Mass: it is more coherent than the Septet and establishes stronger contrasts than the preceding Cantata."[7]

FOOTNOTES TO CHAPTER II

1. Hans Keller, "Stravinsky's Schoenbergian Technique," Tempo, No. 35 (Spring, 1955), pp. 13-20.

2. Ibid.

3. Keller misses the very last one in the cello part--an O_{10} form in the last bar of the movement.

4. Keller, op. cit.

5. I.e. extraneous to the ritornelli.

6. Richard F. Goldman, "Current Chronicle," Musical Quarterly, XLII, No. 2 (April, 1956), pp. 236-239. Goldman quotes a friend who assures him that "every note except one is accounted for," but the note is not identified, and could not be found by this writer.

7. Keller, op. cit.

CHAPTER III

TOWARD TWELVE-TONE SERIALISM

Canticum Sacrum ad Honorem Sancti Marci Nominis

The Canticum Sacrum was commissioned by the Venice Music Festival and first performed under its auspices in September, 1956. Its composition occupied Stravinsky for approximately a year, from early 1955 to 1956. Like the Symphony of Psalms, its text comes from the Latin Vulgate Bible, but this time from both Testaments. In conception, scope, organization, and instrumentation the Canticum is unquestionably unique. One writer sees in it

> the entire panorama of European musical history . . . from Gregorian chant to Webern's spacious intervals; from medieval organum and faburden to serialism; from the Byzantine modes to polymodality, polytonality, and atonality; from the old-fashioned diatonic to the modern polydiatonic style and out-and-out chromaticism; from phrases which recall the archaic effect of the hocket and inflexions reminiscent of the Venice School of the Renaissance to the tightly-drawn dodecaphonic curves; from the baroque solidity of harmonic masses to the contrapuntal pointillism of the ultra-moderns; from an ensemble in the style of the old Venetian school to an instrumental disposition which betrays an acquaintance with Webern's Variations for orchestra.[1]

The same writer concludes, not unexpectedly after the outburst above, that

> the Canticum is the most comprehensive and essential synthesis of elements it is possible to

> imagine at this particular stage in the evolution of European music. The multitude of ingredients which go into this "summa" is staggering; but because of the homogeneity achieved by the fusion of elements and the very size of the work . . . --and indeed about three-fifths of the work seems positively threadbare--very few of its qualities can be appreciated at first sight or on first hearing; they need to be heard again and again before they yield up their secrets.[2]

Though this represents an extreme view, it may give some idea of the complexity of the piece. Unfortunately it will not be within the scope of this paper to examine in detail the interesting aspects alluded to above, nor will there be space for an adequate discussion of the setting of the text--a fascinating field of inquiry in itself. Instead we will have to confine ourselves to the serial aspects of the piece insofar as is possible, since that is the specific field of inquiry of this paper.

The Canticum Sacrum consists of five movements which, according to Robert Craft,[3] correspond to the five domes of St. Mark's in Venice, the central movement, like the central dome, being the largest. There is no doubt that the arrangement of the five movements is concentric and symmetric. The last movement is an almost exact retrograde of the first movement;[4] the second and fourth movements are solos for tenor and baritone respectively;[5] and the central third movement is a large ternary form symmetrically organized within itself. The total structure of this movement may be represented in this fashion:

III

A B A

(a b b) (a a b)

The structure of the entire Canticum may be represented similarly:

III

A B A

II----------IV

Introduction (Dedicatio) I----------V

The instrumentation of the Canticum is unusual, having been designed specifically to cope with the "anti-Stravinskyan" acoustics of St. Mark's. Four trumpets, one of which is a bass trumpet, and four trombones comprise the brass section. One of the trombones is a bass trombone and one is the rare contrabass trombone, which replaces the tuba, whose tone would have been too fuzzy for St. Mark's. French horns which, like the tuba, are conical brass instruments, are excluded from the orchestra for the same reason that the tuba was. There are no clarinets, violins, or cellos in the orchestra either, and of course no percussion. A solo flute is used only in the second

movement, the two oboes only in the third and fourth movements. The harp and English horn are reserved for the second and third movements. Two bassoons and a contrabassoon complete the woodwind section. Orchestral violas and double-basses are the sole representatives of the string family. Following, apparently, the tradition of the master Venetian composers, an organ is included in the orchestra, though, with one brief exception, it is never mixed with any instruments but the bassoons, which double its bass.

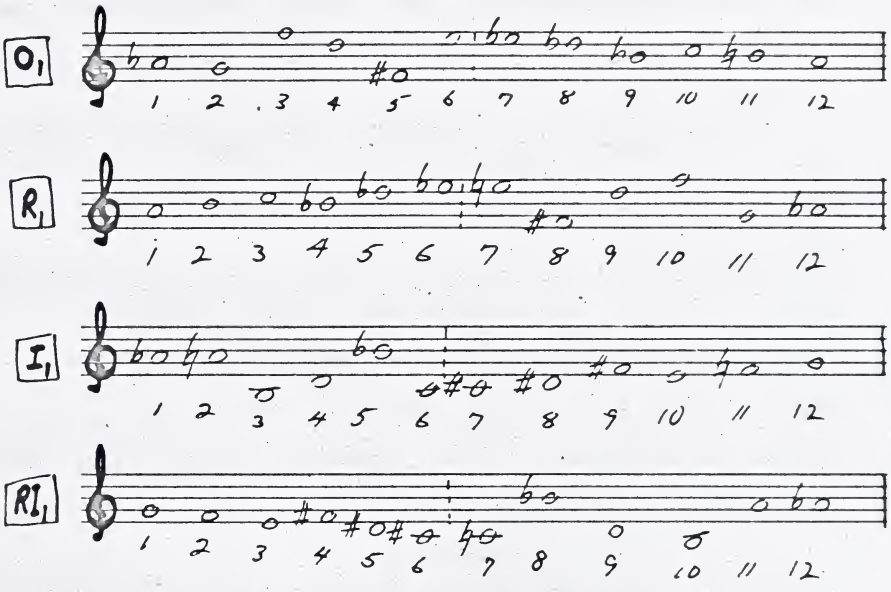
Stravinsky, according to Craft,[6] solved the acoustical problem by

> the general method of sustaining rapid movement and then stopping it periodically in order to allow the sound to clear. Consequently the cadences are usually held, and new sections are prepared for by pauses. Also, the few full passages are simple in style, while the most intricate music, as for example the whole of the second movement, is confined to ensembles that are too small or too independent to be subject to acoustical changes.

The second movement, Surge, aquilo, marks two milestones for Stravinsky: it is the first piece to be composed in complete twelve-tone serial technique, and it is the first serial piece of his to use the row vertically in the generation of chords. The basic series appears first in the tenor solo, in the second through the fourth bars (bars 47-49 by Stravinsky's numbering, which is continuous throughout the five movements). The prime forms are given below for reference:

Ex. 8

II - Surge, aquilo



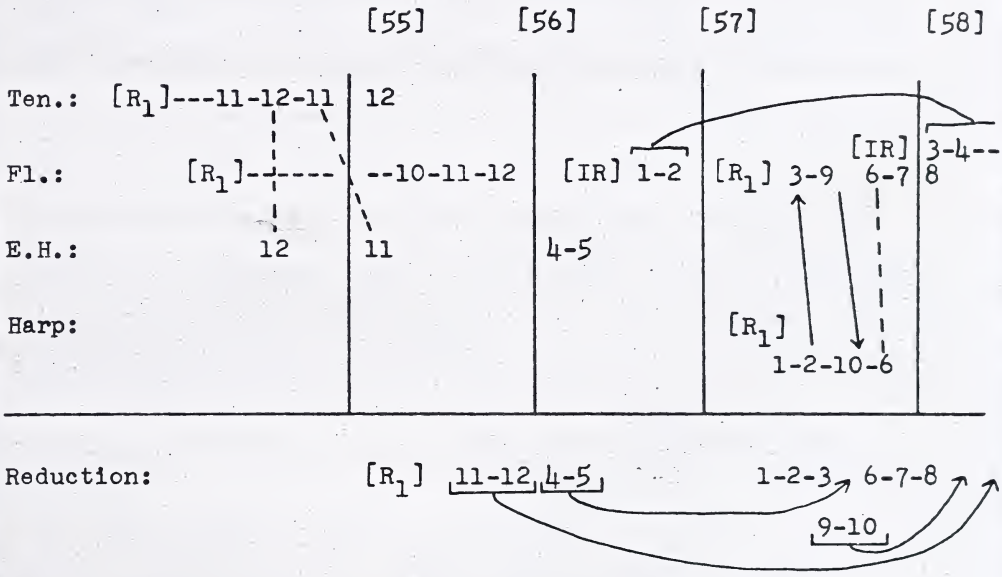
Surge, aquilo opens with three tetrachords played by the harp and three solo double-basses in harmonics. Each tetrachord contains four different notes from the retrograde form of the series, comprising a complete vertical/horizontal statement of that form: R_1-- 2 6 12
4 5 10
3 8 9
1 7 11

In the next measure the tenor begins a linear statement of the original series, accompanied by flute and English horn with the inverted retrograde. The form of the latter suggests a serial

whim on Stravinsky's part, for it apparently was obtained not by retrograding the inversion (RI proper) but by inverting the retrograde ("IR). The two forms are related in this way: $RI_1 = IR_{10}$, and $IR_1 = RI_3$. In the English horn part referred to, the series can be read as either IR_1 or RI_3, and since the other opening statements are prime forms, one wonders if Stravinsky may not have proceeded with a slight disregard of more orthodox serial procedure. Since this can only be a matter of conjecture, however (the first statement of the inversion is a transposed form, occurring immediately after the suspect "IR"), the piece will be analyzed in terms of traditional serial procedure, and all potential IR forms (except for the prime, which will be indicated in brackets) will be converted into their RI equivalents.

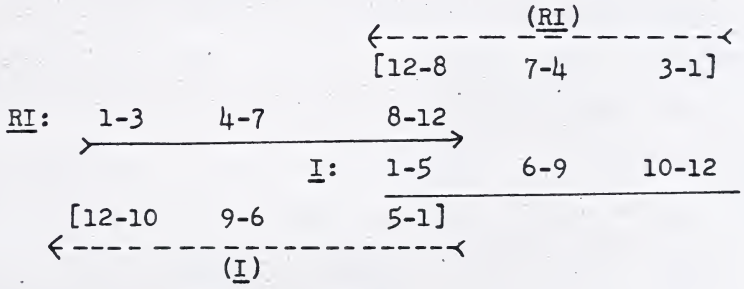
At the conclusion of RI_3 [IR] in bar [50], the flute begins a quite garbled version of I_4. The order of the series is #1-#2-#3-#6-#5-#7-#8-#10-#9-#4-#11-#12. Three shifts would be necessary to bring the row into proper order. Simultaneously with this, the tenor sings the first six notes of the prime retrograde, then the first six of RI_9, then begins R_1 again (overlapping one note with RI_9), but this time completing it. Meanwhile another retrograde has begun in the harp and is passed to the flute, which ends it in bar [56]. At this point a garbled version of R_1, similar to the I_4 above, occurs in the English horn, flute, and harp, with two notes of a new series beginning in the middle. A graphic representation

of this complex will make its structure clearer, perhaps, than the music itself could:



In measure [58] the F# of the flute is both #8 in the R series and #3 in the RI_3 [IR] series that began in the middle of bar [56] as an intercalation. The flute completes its row with the help of the harp, while the tenor sings an I_9 form. From [63] to [75] the tenor repeats the serial (though not the melodic) form it had in bars [50]-[55], i.e. half of R_1, half of RI_9, then all of R_1. The accompaniment in bars [63]-[69] consists of prime statements of I and O in the flute and harp, respectively. In bars [69], [70], and [71] the most interesting

structure of the piece occurs. A vertical statement of RI_1 by the flute, harp, and two solo double-basses in harmonics is arranged in such a way that the last five notes of the series (#8-#12) double as the first five notes of I_1, which then proceeds in a complete statement by simply retrograding the vertical sonorities of the preceding retrograde inversion. This is a mirror structure, and for Stravinsky to tackle such complexities in his first twelve-tone piece with only the relatively elementary experience provided by the In Memoriam behind him evinces a keen, quick mind. The structure functions in this way:

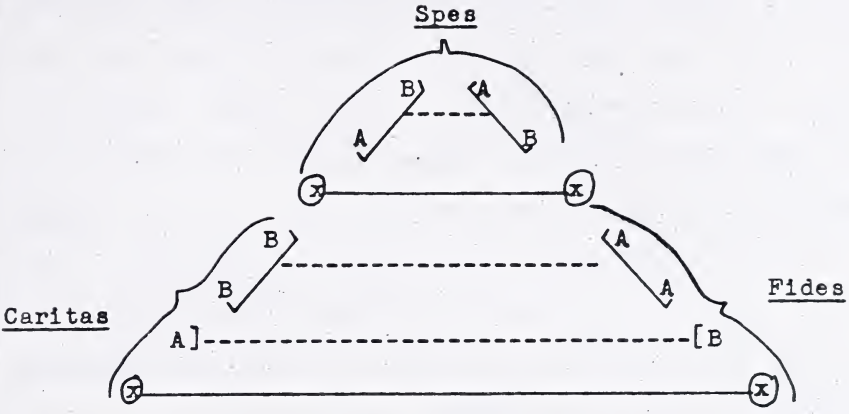


Serial orders from here to the end of the movement can be traced with little difficulty. The flute and English horn share an I_3 in bars [73]-[75], then an O_1 from [76] to [81]. In bar [81] is probably a serial error or a misprint. The tenor sings the first six notes of R_1, the first six notes of RI_9, then repeats the pattern. The fourth note of RI_9 should be a D, but in bar [81] it is printed as Db. In the three other places this order occurs in the movement, the

note is D natural. Checking the recording,[7] the writer was gratified to note that the error had been caught and corrected.

In bars [82] and [85] the opening sonority of three solo double-basses in harmonics plus harp is repeated, but this time their chords come from the original series rather than from its retrograde. From [86] to the end the tenor sings I_2, then O_1. The flute simultaneously plays I_{10}, then "improvises" the last four bars from notes #6 and #7 in the tenor's O_1 series. Also in bar [86] the harp and English horn share I_6, but the last two notes of this series (Bb and C) are lacking at the point the movement ends (bar [93]).

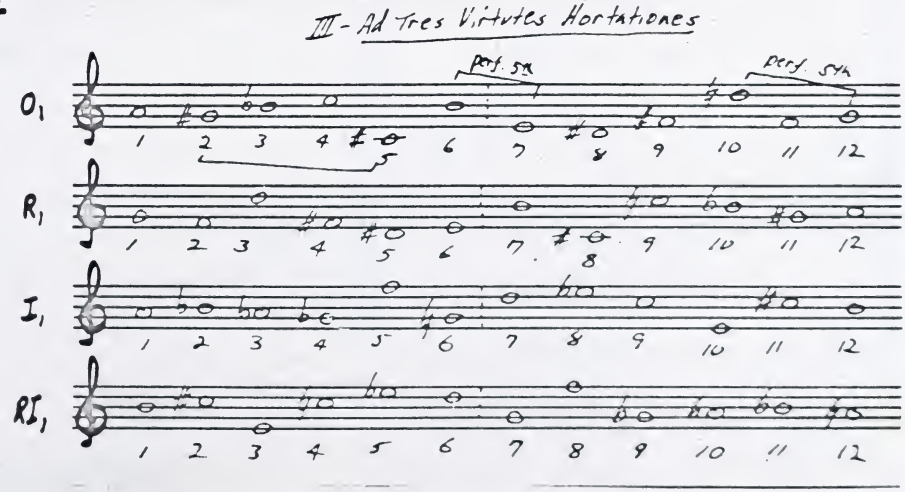
The third movement, Ad Tres Virtutes Hortationes, is subdivided into three sections--Caritas, Spes, and Fides. The outer sections use full chorus, the central section adds the two soloists. The form of Caritas is an inverted bar (A-B-B) formed by the literal repetition of measures [116] to [129], marked 116bis to 129bis in the score. Spes, after an introduction, is double-binary in form--A B, A B' --and is shaped by the alternation of strophes for the two soloists and then the chorus. The last section, Fides, is a bar-form (A-A-B) with an introduction and coda. The "introductions" referred to above are actually the same organ ritornello in different transpositions. Using "x" to represent the ritornelli for the moment, and A's and B's to illustrate formal organization within a section, the concentric, symmetrical construction of the complete movement can now be demonstrated:



No wonder this movement has been likened to the central dome of St. Mark's!

The twelve-tone series of the previous movement has been abandoned for a new one, which is stated by the organ alone in the introduction to the Caritas section. These are its prime forms:

Ex. 9



Serially, this movement is very straightforward--much more so than the previous movement, in fact. All the serial statements are linear, though there is some crossing of rows. There are no specifically vertical serial complexes like those in the Surge, however. The complete serial plan of the movement can now be sketched:

Caritas:

		[99]		[107]
E.H., tpts., obs.:		RI_2		I_2
Bass trbs.:		R_{11}		R_1
Organ:	O_1	R_6 (+bsn., obs.)		
Vlas., basses:				R_5

	[116]				[129]
Sopranos:	:		RI_5	RI_5	:
Altos:		R_8	R_8	O_8	
Tenors:	RI_3 [IR]	RI_3	I_3		
Bass tpt.:		RI_2		I_2	
Strings: O_5 (garbled)	:				:

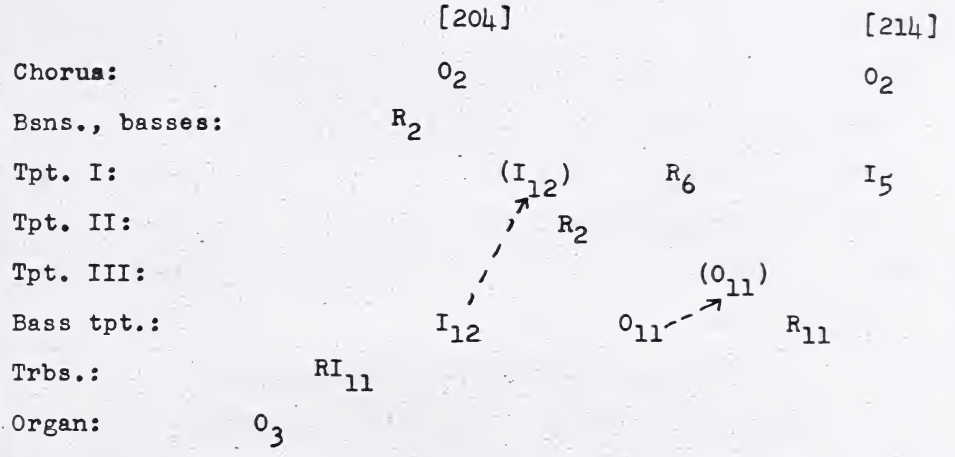
Spes:

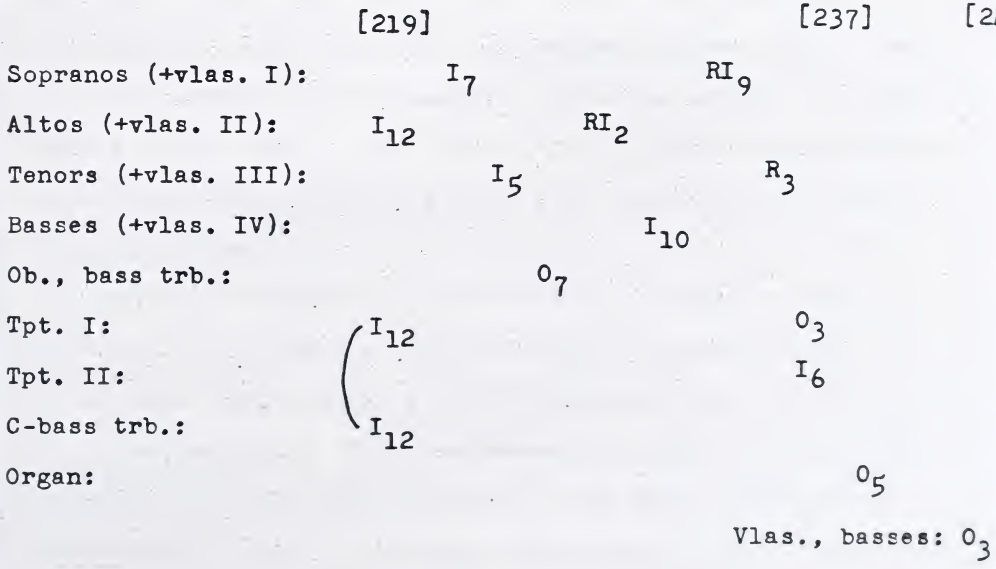
			[148]		[152]
Solo ten.:			I_1		
Solo bar.:			R_{11}		
Ob., E.H.:		I_{11}			
Bsns.:	RI_2				
Tpts.:	RI_{10}				O_3 (+ harp)
Org.:	O_4 RI_2				
Stgs.:		RI_8 (+C-bsn.)	Bass trb.: O_6 (first three notes borrowed from #8, #10, and #11 in RI_8)		

---

	[154]	[158]		[169]		[178]
Solo ten.:			I_1			I_1
Solo bar.:			R_{11}			R_{11}
Sopranos:	RI_2	R_5		R_5	O_4	
Altos:	I_2	I_8		I_8	I_{12}	
Obs., trb. I:	I_4			I_4		
Low trbs.:		O_6			O_6	
Tpts., hp.:			O_3			O_3

Fides:


[204]
[214]
Chorus:
O_2
O_2
Bsns., basses:
R_2
Tpt. I:
(I_{12})
R_6
I_5
Tpt. II:
R_2
Tpt. III:
(O_{11})
Bass tpt.:
I_{12}
O_{11}
R_{11}
Trbs.:
RI_{11}
Organ:
O_3


[219]
[237]
[244]
Sopranos (+vlas. I):
I_7
RI_9
Altos (+vlas. II):
I_{12}
RI_2
Tenors (+vlas. III):
I_5
R_3
Basses (+vlas. IV):
I_{10}
Ob., bass trb.:
O_7
Tpt. I:
I_{12}
O_3
Tpt. II:
I_6
C-bass trb.:
I_{12}
Organ:
O_5
Vlas., basses: O_3

The viola doublings of the choral parts from [219] to [236] are optional and are intended to be played "only if required for acoustical reasons."[8] One note is unaccounted for--the bass trombone C in measure [161]. In all probability the C is a mis-print for Db, which should be tied over to the Db in the next bar. This is the way the passage reads in the recapitulation of this section (bars [176-177] ff.), at any rate. This error, if it is one, was not corrected in the recording (which was conducted by Stravinsky). This is worthy of comment because, in general, a row that is garbled is completely so, as if Stravinsky had systematically tried to disguise it. It is only rarely that a row moving linearly--even when shared by three or four instruments--breaks natural order. This happens in, for example, the bass trumpet part beginning in bar [204]. The series, an I_{12} form, occurs in the order #1-#2-#3-#4-#5-#8-#6-#7-#8- etc., where #8, a D, anticipates itself.

In this movement the inversion is the preferred form. Only one of its possible transpositions is ommitted--I_9. Of the original series three possible transpositions--O_9, O_{10}, and O_{12} are omitted. Both the retrograde and the retrograde inversion are found in seven forms. The prime form of the latter does not occur, but RI_3, which equals "IR_1," does, lending credence to the suspicion (<u>supra</u>, pp. 53-54) that Stravinsky obtained this form by slightly unorthodox means.

The fourth movement, <u>Brevis Motus Cantilenae</u>, uses the

new row that was introduced in the preceding movement in a more complex fashion but, at the same time, with its harmonic-tonal organization more clearly in evidence. Typical of the increasing complexity is the way the opening statement of the retrograde inversion is split up among five instruments:

RI:

Ob. I: 10-11

Bsn. I: 1---------4----7-9-----

Bsn. II: 2------5------8-----

Vlas.: 1 2-3-----6----- 11-12

Basses: 2 12

It should be noted that this is the prime retrograde inversion, not the inverted retrograde (i.e. RI_1 or IR_{10}, but not IR_1). The serial statements that follow are also primes, so if the earlier reasoning that postulated an IR instead of an RI is valid, then one is faced with the fact of serial ambivalence on Stravinsky's part.

At the conclusion of the above series, the solo baritone enters with a statement of O_1, answered antiphonally by the chorus, with the sopranos and tenors beginning the row and the altos and basses completing it. Two trumpets and one trombone articulate different points of the row. In bars [262] to [265] the bassoons, violas, and basses divide a statement of I_9. The last note of the series is bracketed in the

bass part as the target of a pizzicato glissando begun an octave and a minor seventh lower on #11 of the series. It is doubtful whether this note would ever be heard in performance; the practical solution followed in Stravinsky's recording was to have the top note (#12, a G) plucked, contrary to the indication in the score. Probably the basses were divided, half making the glissando and half articulating the end of it. At this point (bar [265]) the baritone and chorus present an antiphonal statement of R_1, paralleling their previous statement of O_1. There is a serial slip this time, however: the ninth note of the series, C natural is missing; in its place is a B, which may have been intended as B#, but which was not corrected either in the score or in the recording. At the conclusion of this series a new section begins, marked piu agitato--a rhythmic fugato for the chorus lasting seven bars, similar to bars [116]-[129] and [219]-[236] in the previous movement, again with optional viola doubling. The serial order is:

[274]

Sopranos: O_6----------

Altos: I_8----------O_{11}---------

Tenors: RI_{11}----------I_{11}----------

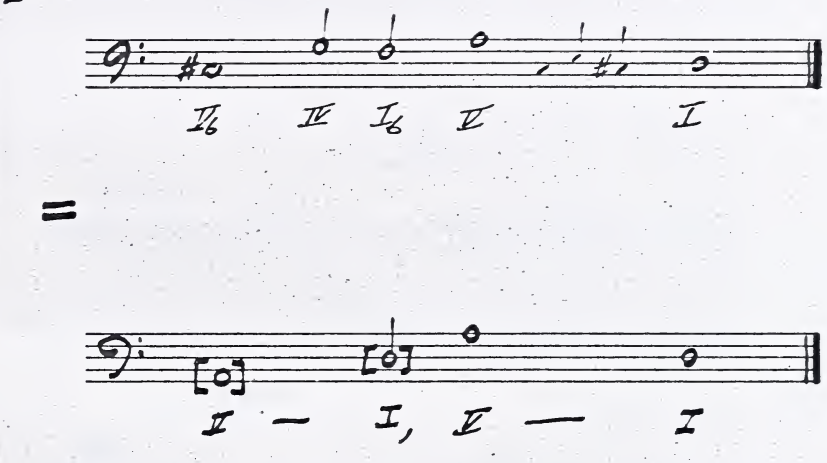
Basses: R_6----------

At bar [281] the baritone soloist returns with R_3, echoed

by three trombones and strings, which present a complex statement of R_6 similar to the opening statement of RI_1, which was presented by five instruments. This section concludes with a statement of O_{11} by the baritone and a Klangfarben/vertical statement of RI_6 by the four trombones and strings. The last section of the movement, marked meno mosso, consists of a solo baritone line (I_{11} and RI_{11}) accompanied only by light pizzicato punctuations in the strings; and a cadential statement of O_{11} by the first oboe, the two bassoons, and the violas (which play only the last note of the series).

The tonal organization of this movement is remarkable, as an abstraction of the bass line will show:

[Ex. 10, cont'd.]



The effect of the long pedal points is to ground the movement very solidly in tonality. The florid twelve-tone lines that evolve above these pedals sound Italianate and ornamental, and not at all chromatic or "Viennese." Tonal organization of the two preceding twelve-tone movements is not as easy to demonstrate, but it is there nevertheless. In Surge, aquilo the note A seems to predominate, with E close behind. The movement ends, also, on a cadence with this perfect fifth. Tonality in the third movement seems governed by the organ ritornelli, which also focus on A. A brief abstraction is given below, with the ritornelli bracketed. The sections intervening

between the ritornelli are reduced to their barest essentials.

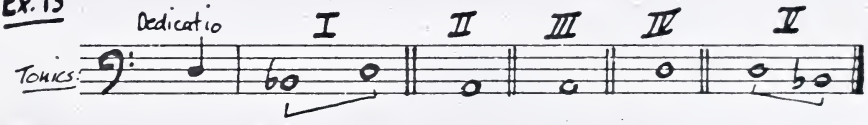
Ex. II

Summary:

Ex. 12

The over-all tonal scheme of the five movements is:

Ex. 13

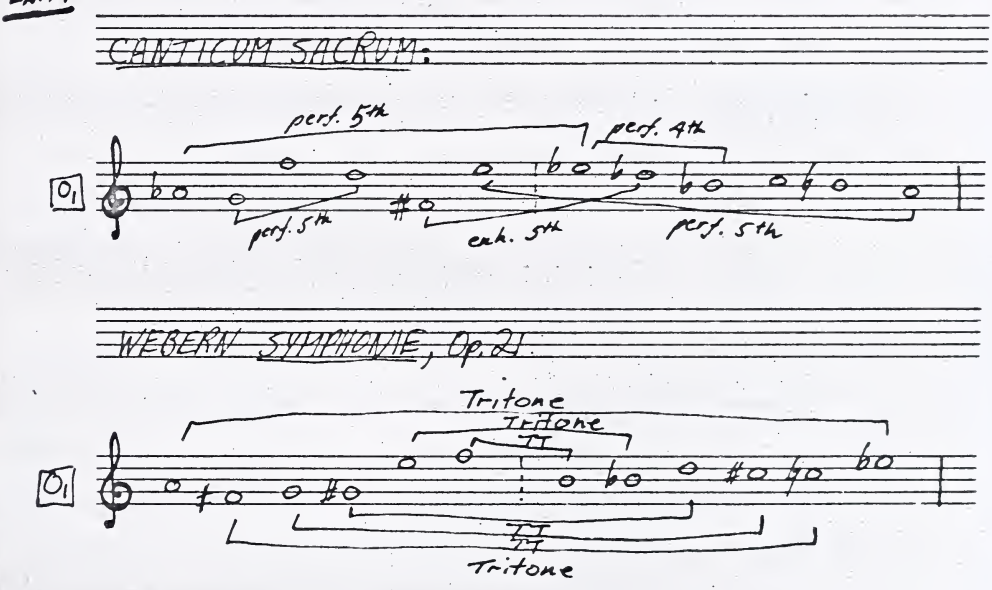


One gets the impression that D is the basic tonic of the entire piece, the Bb's not being particularly convincing. There is never a Bb triad or open fifth of any kind. Instead the Bb appears to function as a polymodal bass to a B minor triad, which is the cadential form it takes. All the basic "tonics" of the various movements <u>can</u> be read as an articulation of a Bb major seventh chord, however (Bb - [F] - D - A).

The Stravinskyan paradox--tonal twelve-tone music--is achieved partly by the way he constructs his series. They abound in fifths and "consonant" intervals, and the tritone so beloved of the Viennese twelve-tone composers is rigorously

avoided. Compare, for example, the first series in the Canticum Sacrum with the series used in the Webern Symphonie, Op. 21:

Ex. 14



The entire Webern series is constructed from a series of expanding tritones, whereas there isn't a single structural tritone in the entire Canticum. This no doubt is one of the reasons why Stravinsky's serial music sounds so ineffably Stravinskyan, and not eclectically Viennese. Roberto Gerhard has stumbled on a truism when he writes that Stravinsky composes twelve-tone music "in the spirit of diatonicism, and diatonic music with a full experience of total chromaticism."[9]

The outer movements, Euntes in mundum and Illi autem profecti, are not serially composed intrinsically, though the fact that the latter is an almost exact retrograde of the former certainly justifies stylistically their inclusion in the same work with twelve-tone, serial movements. One is reminded of Hindemith's Ludus Tonalis--a collection of Preludes, Interludes, and Fugues for piano--in which the Postludium is not only a retrograde, but a retrograde inversion of the opening Preludium. Other precedents in modern music are rare, however.

The outer movements of the Canticum are further distinguished from the rest of the work in that "they are governed by tonal basses, are massive and solidly harmonic in style, and are regularly strophic"[10] to borrow Craft's phrase. "Solidly harmonic" must not be taken too literally, however. "Pandiatonic" (cf. the Stravinsky of the 1930's) would be closer to the mark. It cannot be emphasized too strongly, though, that the entire piece sounds stylistically unified, whether or not it is on paper. Hardest of all to believe, even the twelve-tone movements have the unmistakable Stravinskyan stamp, though this is not so incredible once Stravinsky's unique, personal way of handling the row is understood.

A word should be said about the texts of the outer movements. The first movement, Euntes in mundum, deals with the Lord's command ("Go ye into all the world, and preach the

gospel to every creature"), the last movement, Illi autem profecti, with its fulfillment ("And they went forth, and preached everywhere..."). Vlad reminds us that the imperative mood of the Latin text of the first movement has a future implication;[11] in the last movement this future has become past.[12] It is symbolically apt, then, that the last movement be a retrograde of the first. The fact that this is also musically convincing offers further evidence of Stravinsky's contrapuntal mastery and genius.

Agon

Agon, "a ballet for twelve dancers," was begun in December, 1953--before In Memoriam Dylan Thomas and the Canticum Sacrum--and completed April 26, 1957--more than a year after the Canticum. As might be expected under the circumstances, it contains both serial and non-serial music which, like the Canticum, is unified by the authoritarian stamp of Stravinsky, and this again is unmistakable.

The long line of Stravinsky's ballets that began with the Firebird is continued in Agon, which is most closely related in ballet style and tradition to Apollon Musagete and Orpheus, though musically its scope is wider and "far richer in substance," as Craft rightly says.[13] We are told that about two-fifths of the ballet was written in 1954 (i.e. before In Memoriam and the Canticum), the rest in 1956 and 1957.

The orchestra employed is the largest since Persephone (1934), though the full tutti is never resorted to, the orchestra being treated instead as an infinite source of chamber-type combinations. As one writer points out, "the traditional use of the symphony orchestra no longer has any place in Stravinsky's orchestral thinking."[14] Stravinsky himself has almost disowned the orchestra, though all his pronouncements must be taken with a grain of salt:

> Though the standard orchestra is not yet an anachronism, perhaps it can no longer be used standardly except by anachronistic composers. Advances in instrumental techniques are also modifying the use of the orchestra. We compose for solo virtuoso instrumentalists today, and our soloistic style is still being discovered.[15]

Agon is divided into three parts, each having from four to six separate movements. Part I consists of three pas-de-quatre--single, double, and triple. Part II has two pas-de-trois and one pas-de-deux, separated by interludes and a prelude. Part III opens with an orchestral Quasi stretto, which is followed by dances "des quatre ducs," "des quatre trios," and "des trois quatuors."

Craft tells us that the Agon pieces were all modeled after examples in a seventeenth century dance manual, and quotes Stravinsky to the effect that one of the engravings in this manual showing two trumpeters accompanying a bransle simple suggested the idea of using the same combination of instruments in his own Bransle simple. Expounding on this idea, Vlad attempts to explain the source of Agon's instrumentation:

> By analogy with the so-called 'hautes et basses danses', fourteenth and fifteenth century literary works referred to 'musique haute et basse' and 'hauts et bas instruments'. The 'high' and 'low' designated the groups of accompanying instruments, and these groups could consist of stringed or wind instruments or combinations such as lute, harp, and drum. In Agon this group consists of mandolin, harp, piano, and percussion, and the whole orchestral structure of the work reveals a concern for balanced groups of timbres.[16]

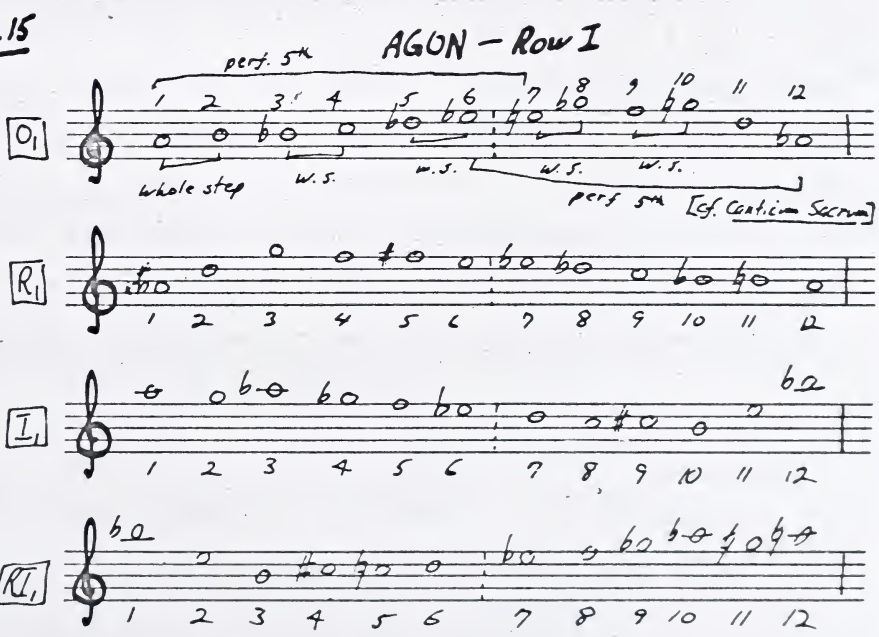
Vlad's translation of "hauts et bas" as "high and low" is musicologically suspect. It is generally accepted now that haut et bas meant loud and soft, not high and low. Haut instruments in the Middle Ages were the trumpets, bagpipes, shawms, bombards, and all manner of percussion instruments; bas instruments were the flutes, recorders, organs, krummhorns, and strings (including plucked instruments like the lute and harp, and bowed instruments like the rebec, vielles, and viols of all kinds). The two categories of instruments were usually separate and distinct, and were used for different purposes.[17] Stravinsky's piece may reveal "a concern for balanced groups of timbres," but this has certainly nothing to do with Medieval and early Renaissance practice, and Vlad is clearly in error in relating the two.

A total of three different twelve-note series are used in Agon. Row I is introduced in the Coda of the First Pas-de-trois in Part II, and is used only in the six pages of this movement. Row II occurs in its complete form only in the Bransle Double of the Second Pas-de-trois. The first half of Row II, however, is used in the construction of the Bransle Simple

(first of the bransles). The Bransle Gay employs a different hexachord from the Bransle Simple. Row III appears in garbled form in the last Pas-de-deux of Part II, more clearly in the Coda that follows, but clearest of all in the Four Duos and Four Trios of Part III. The very last Coda is a recapitulation of the opening fanfare from the first Pas-de-quatre, and does not use any of the above specific serial material.

Row I is stated first by the harp and solo cello in bars [185] to [189] (Stravinsky's numbering is again continuous). Its prime forms are given below:

Ex. 15



The pedal fifth (C-G) in the trumpets and mandolin that sounds

simultaneously with the harp and cello in bar [185] ff. is not serially derived, but it is placed there to provide a tonal reference. The violin solo in bars [193]-[229], consisting almost entirely of major and minor sixths, is also freely composed, but all the rest of the movement is serially strict except for a recurrence of the mandolin-trumpet fifth (bar [208]) and two triadic passages for the same combination (bars [229]-[233]).

Running through most of the movement is a series of neo-Webernian pointillizations of O_1 in the trombones and piano, in which no instrument has more than two successive notes of the series. This fractionalization of the row is new for Stravinsky, though there are hints of it in the Canticum Sacrum.[18] Note also the similarity between the different orders. Notes #3-#12 in R_1 are exactly the same as notes #1-#10 in I_{11}. Similarly, notes #3-#12 in RI_1 are the same as #1-#10 in O_3. This sometimes makes precise analysis difficult when the rows run vertically, as they do in the last five bars. The complete serial order of the movement is:

Coda:	[198]		[205]		[208]
Fls.:	I_1	I_1			R_1 (+pf.)
Mand.:			I_1	O_1 (3-4)	
Hp., vc.:	O_1				
Trbs., pf.:	O_1	O_1	O_1 (1-4)		O_1

	[219]	[224]	[229]
Fls.:	I_1	I_1	R_1 (+vl., bass)
Trbs, pf.:	O_1	O_1 (1-4)	
Mand.:	I_1 (10-12)	I_1	

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	[234]	[245]	[249]
Fl. I:	R_3		
Fls. II, III:	I_1		
Tutti:	O_1	O_1----------	X X
		Vln.: I_1---	
		Vc.: R_3---	

The X's at [249] in the diagram indicate the uncertainty of the identification. All twelve notes of the chromatic scale are found in this complex, so it could, in theory, be any transposition of any order, but it is not possible to trace any one order in logical progression without skipping backwards and forwards to make it "come out right." Fragments of different series can be traced partially, but this writer has found it impossible to guess what Stravinsky's original plan was.

Note that the only transposition employed is R_3. All other forms are primes. The retrograde inversion is not used at all.

The Second Pas-de-trois (the Bransle Simple) in its hexachordal construction is reminiscent of the earlier Stravinsky pieces built on short series, e.g. the Septet (especially the first movement), Shakespeare Songs, and In Memoriam Dylan Thomas. The hexachord used in the Bransle Simple is, in fact, closely related to the opening hexachord in the Septet which, it will be recalled, generated the material for all three movements. There are free passages in the Bransle Simple which also suggest the earlier pieces. In bar [287] occurs a D major triad scored for bass harmonics and bass clarinet which functions as a harmonic pedal in the same way that the mandolin and trumpet open fifth did in the Coda movement using Row I. This triad recurs in bars [297] and [308]. It may have been drawn from the two notes that are most prominent in the original hexachord (by dint of temporal and rhythmic stress), the major third D-F#; or it may be "free." The bass clarinet solo and harp "timpani fifths" in bars [297] to [304] also appear to be freely composed. One other unexplained note--the cello pizzicato C in bar [288]--may be part of an anticipation of Row II, which makes its first full-fledged appearance in the subsequent Bransle Double. C is the first note of Row II, the D that follows it in the cello (#3 in 0_{10}) is also the second note of Row II, and the third note of Row II, Eb, is found in the harp just after the cello plays, where it also doubles as #5 in 0_{10} (Hexachord I). The second hexachord of Row II (A-Bb-C-C#-D#-G#) can also be found in this

passage, beginning with the concert A in the bass clarinet (bar [287]) and Bb in the harp, then skipping to the cello C and the harp's C# and Eb (the latter doubled in the first trumpet), and concluding with the trumpet's G#; this hexachord is transposed up a step from the prime form, and would actually be O_3 (#7-#12) from Row II. The latter two notes double as notes #5 and #6 in the O_{10} series of Hexachord I, which interleaves the above. Of course the cello C may simply be gratuitous. The generic hexachords of the first two bransles are given below for reference, along with the principal permutations:

Ex.16

The complete serial plan of the Bransle Simple can now be given:

[284]

Cl. I: O_8

Cl. II: O_4

Tpt. I: O_1 I_{10} O_1 O_1 O_8 R_7

Tpt. II: O_1 I_{10} O_1 O_1 O_8 R_7 [strict canon at unison]

Tpt. III: RI_6

Trbs.: I_1

Hp., b-cl.: I_6

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[291]

Fls.: R_9 (1-4)

Cl. I: O_8

Cl. II: O_4

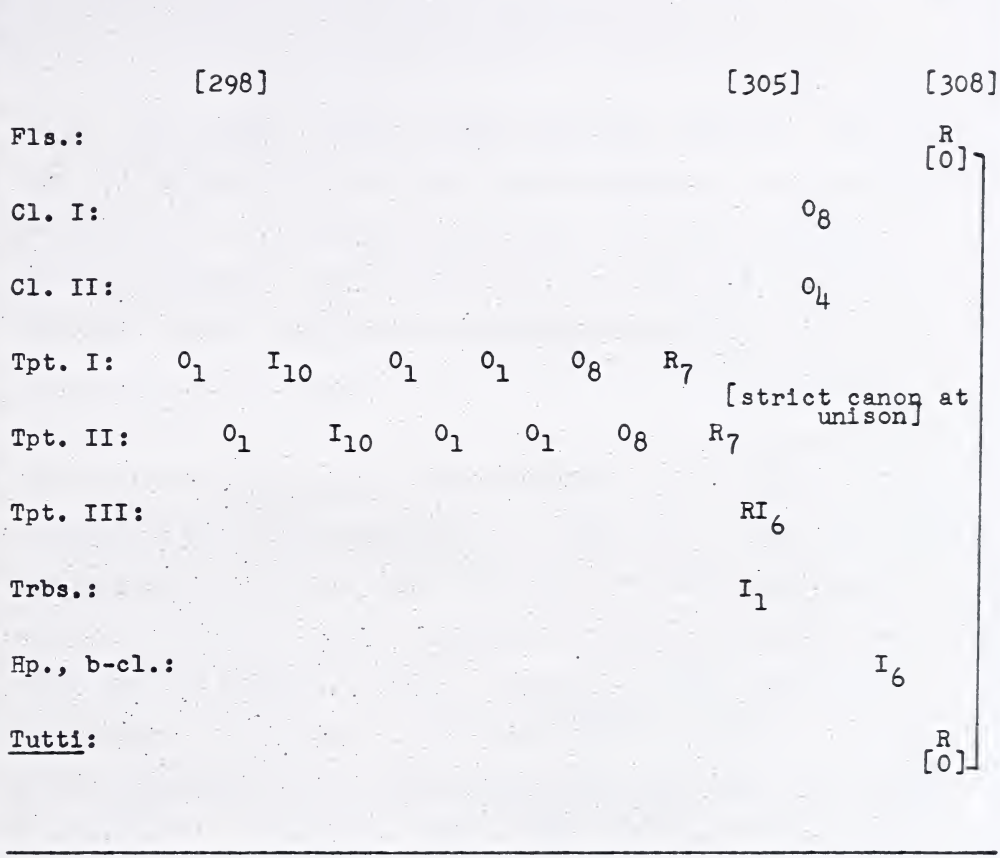
Tpt. I: R_9 (5-6), I_{11} (1-4)

Trbs.: I_1

Hp., b-cl. I_{11} (5-6) I_6

Vc.: O_{10} (1-4) [5-6 in hp. and tpt.] I_8 [+hp., fl.III]

Vlns., vlas.: I_8



The form of the movement is strophic, with the first and third strophes most nearly alike (bass clarinet and harp are added to the trumpet canon in the third strophe). The tutti sonority at the very end can be read as either the original hexachord or as its retrograde, since it contains the six different notes that comprise the two.

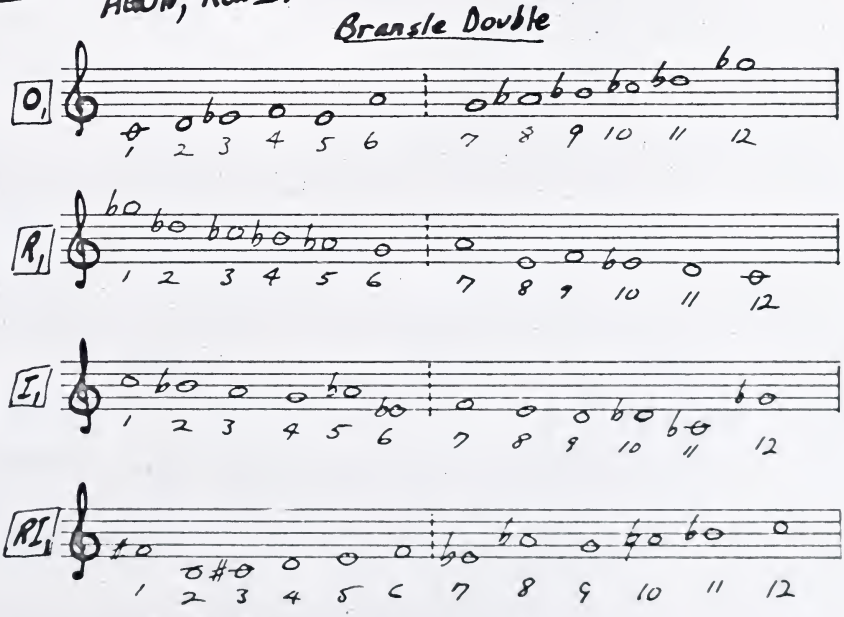
The next movement, Bransle Gay, is constructed from a new hexachord (Hexachord II). While the Bransle Simple was predominantly linear, the Bransle Gay is predominantly harmonic

and uses the hexachord in the construction of vertical sonorities. The middle section of the movement, however, does present the hexachord horizontally, and it was this section that made possible the proper identification of the hexachord, working backwards. Bars [328]-[331] are the only serially free ones in the twenty-six measures of the piece. Of unusual interest is the castanet part which runs isorhythmically throughout the movement in an unvarying 3/8 ostinato, while the meters for the rest of the orchestra vary in typical Stravinskyan fashion from 3/8 to 7/16 to 5/16 etc. After the opening castanet measure, flutes, bassoons, and harp play four vertical statements of the original hexachord, each one complete in each measure. After a one-bar castanet interlude the pattern is repeated, though the four-bar phrase is divided into two parts which are reversed in order from the original statement. In measures [321]-[325] the first flute plays two linear statements of the retrograde inversion, which begins the contrasting middle section. In bars [324] and [325] the second flute plays the first four notes of R_2, which is completed by the second clarinet. The last note of R_2 is also the first note of R_3, which is then played by the second clarinet. Meanwhile, the first clarinet is playing the original hexachord. At the conclusion of the clarinets' hexachords, the two flutes share a statement of O_{11}. After the four free bars that follow, the second, third, and fourth measures of the movement are recapitulated. The piece ends as it began,

with a one-bar castanet solo.

The Bransle Double is the first piece in Agon to be entirely composed from a twelve-note series. The first half of this series is identical with Hexachord I of the Bransle Simple transposed down a step. Though the movement is serially composed, the treatment of the series is very free, if not haphazard. Not only are the hexachords used independently, but the series is further broken down into threes and fours which alternate in blocks. The original series and its prime permutations are given below:

Ex. 17 AGON, Row II:



The series in this movement are used both vertically and horizontally, and the blocks of threes and fours mentioned above, as well as the hexachords, are autonomously interchangeable. Since the construction of this movement is unusual, its entire serial plan will be given:

Bransle Double:

	[340]
Trb., tpt.:	O_4 (7-12), O_4 (7-12), RI_4 (1-6), I_6 (7-12), R_4 (1-6)
Vlns.:	O_1----------RI_1----------

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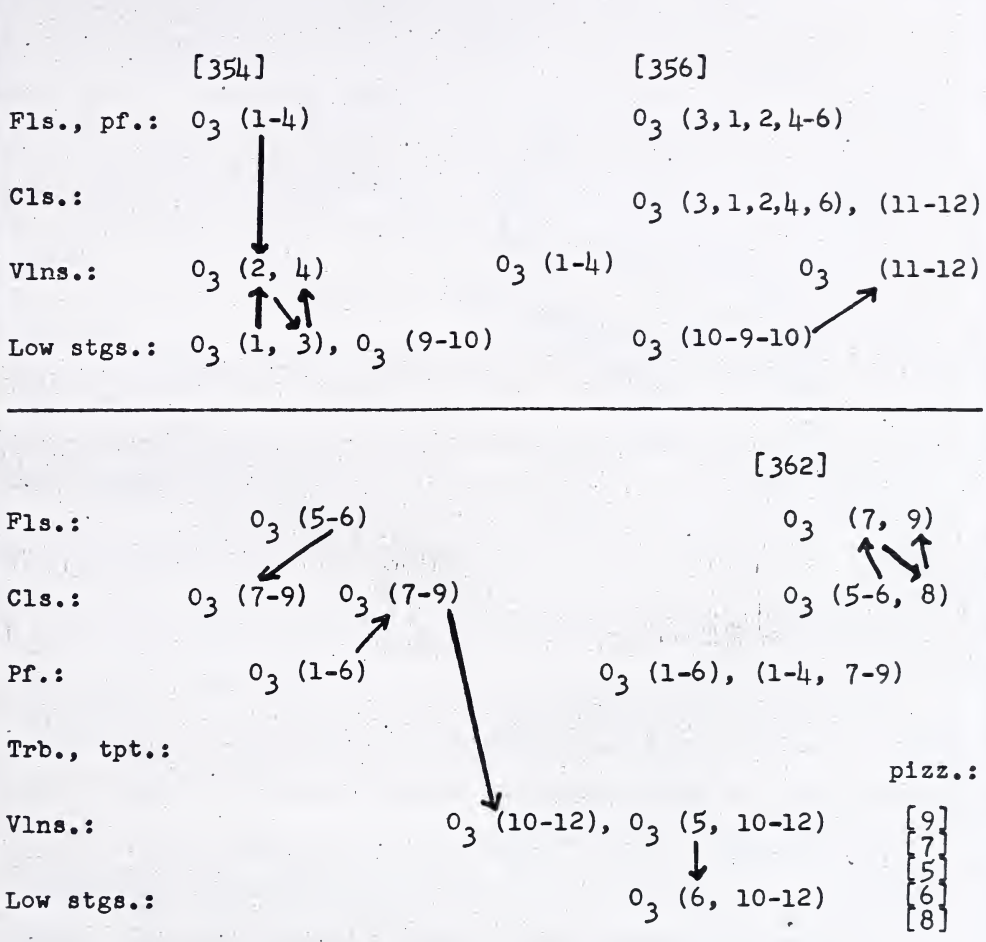
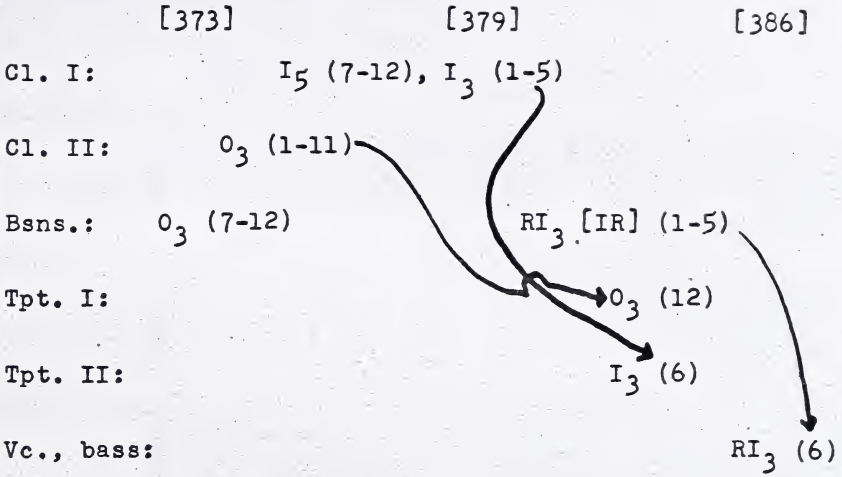
	[344]
Trb., tpt.:	O_4 (7-12)----------O_4 (7-12)----------
Vlns.:	O_1----------
Low stgs.:	I_{11} (7-12), RI_8 (1-6), R_3 (1-6), O_3 (7-9)

---

	[348]	[352]	
Fls., pf.:		O_3 (1-4)	
Trb., tpt.:	RI_4 (1-6), I_6 (1-6), R_4 (1-5)		
Vlns.:	RI_1----------		
Low stgs.:	O_3 (1-3), O_3 (10-12), O_3 (4-6)		O_3 (7-9)


[354]
[356]
Fls., pf.: 0_3 (1-4)
0_3 (3,1,2,4-6)
Cls.:
0_3 (3,1,2,4,6), (11-12)
Vlns.: 0_3 (2, 4)
0_3 (1-4)
0_3 (11-12)
Low stgs.: 0_3 (1, 3), 0_3 (9-10)
0_3 (10-9-10)
[362]
Fls.: 0_3 (5-6)
0_3 (7, 9)
Cls.: 0_3 (7-9) 0_3 (7-9)
0_3 (5-6, 8)
Pf.: 0_3 (1-6)
0_3 (1-6), (1-4, 7-9)
Trb., tpt.:
pizz.:
Vlns.: 0_3 (10-12), 0_3 (5, 10-12)
[9]
[7]
[5]
Low stgs.: 0_3 (6, 10-12)
[6]
[8]
[365]
[369]
Trb., tpt.: 0_4 (7-12), (7-12), RI_4 (1-6), I_6 (7-12), R_4 (1-5)
Vlns.: 0_1----------RI_1----------



The form of the movement is a recapitulation-bar with coda: A (8 bars), A' (8 bars), B (13 bars, A (8 bars), Coda (14 bars).

Row III, though used in the Pas-de-deux and Coda of Part II, never once appears in its complete form. Instead it is fragmented even more severely than the movement just analyzed above. The first time it occurs in a linear statement of twelve different notes is in the Four Duos of Part III, when the lower strings play it unaccompanied (bars [520]-[522]), so that its identity is unmistakable. Its prime forms are:

Ex. 18 AGON, Row III:

This one-page movement (Four Duos) has been criticized by Vlad for the unimaginative and straightforward way in which the series is handled,[19] but only a professional snob could object to having the series presented once in an intelligible fashion. One is reminded of the objections to the serial identifications printed in the score of In Memoriam Dylan Thomas.

Since this movement is the source of the third and final twelve-note series, it is only logical that the analysis begin here.

Four Duos: [534]

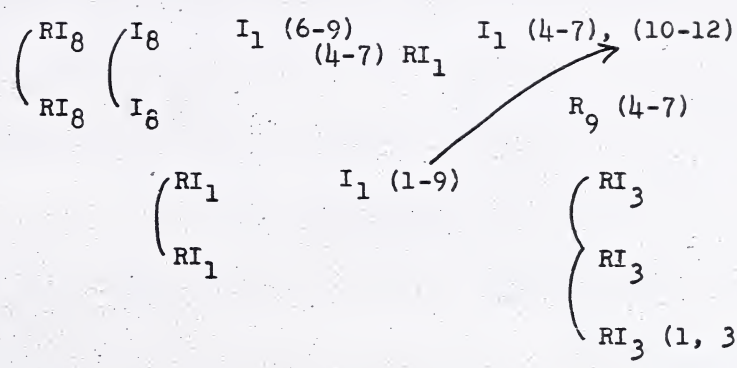
Trbs.: I_1 O_1

Stgs.: O_1 RI_1 I_1 I_7 (7-12), R_{11} (7-12) R_{11} (1-4, 6-10)

The last statement of R_{11} in the strings ends with the tenth note of the series. Notes #11 and #12, however, are found on the next page as the first two notes of the new movement, Four Trios. This musical enjambement (the end of Four Duos is marked attacca) leads directly into the new movement, which opens with a fugato. This fugato is extremely complex serially and, since the most common unit of construction here is the serial tetrachord, precise analysis is impossible, for almost any serial group of four notes, out of context, can belong to two different serial orders. For example, notes #5-#8 in the original series correspond intervallically to notes #5-#8 in the retrograde inversion; #5-#8 in R correspond to #5-#8 in I; #1-#4 in O is equivalent to #9-#12 in R, etc. Further complicating matters are tetrachordal correspondences within the same order as, for example, #1-#4 in RI and #6-#9 in RI, #4-#7 and #9-#12 in O, #4-#7 and #9-#12 in I, etc. Any analysis, therefore, will have to be tentative until Stravinsky makes his intentions clearer.

Four Trios:

[543]



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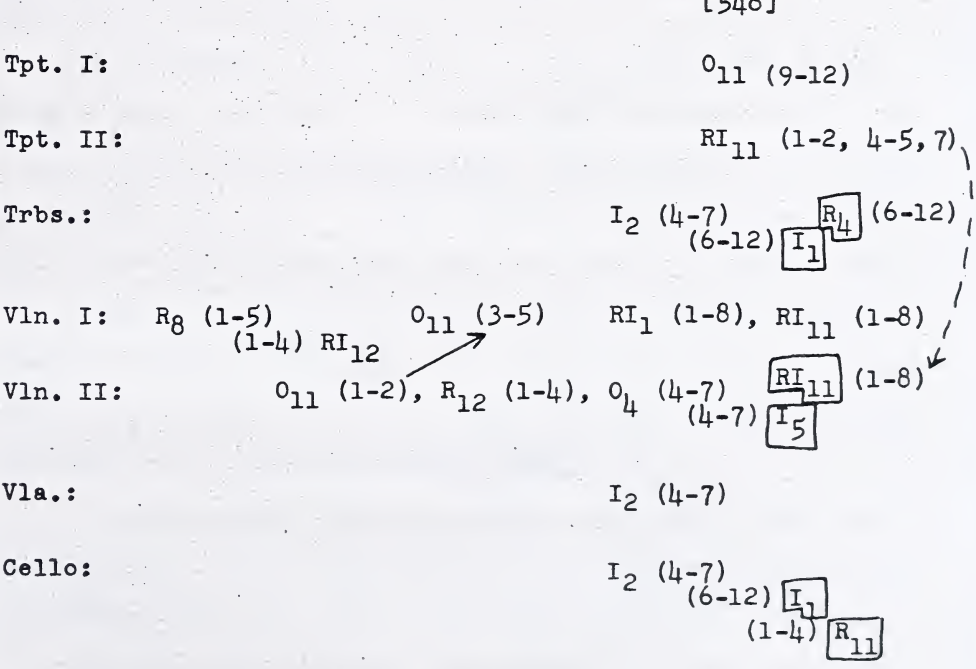
[548]



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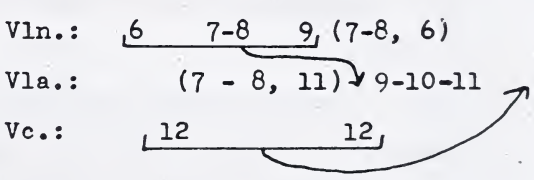
	[549]	[553]
Tpt. I:	RI_8	
Tpt. II:	R_4 (1-7)	RI_7 (6-12)
Trbs.:	R_4 (6-12) (1-4), (5-6) O_3	
Vlns., vlas.:	RI_8	I_8
Vc., bass:		R_{11} I_1 [+vl.,pf., harp]

At the conclusion of the last I_1 in the strings the final Coda begins, and this is a recapitulation of most of the opening movement (the Pas-de-quatre). Above the last two serial statements (R_{11} and I_1) muted horns play a non-serial four-part chord that anticipates the recapitulation proper, for the trumpets enter with exactly the same sonority in the fanfare-figure of the Coda. The last note of the first trumpet's RI_8 series--a G--may be taken from the third horn when the four horns enter in measure [553].

In the charts above an attempt was made to indicate overlapping orders, some of which are boxed to reduce visual confusion where the page becomes most cluttered. With the principal Row III-movements now analyzed, we can turn back to some of the earlier movements.

The first appearance of Row III, as mentioned earlier, is in the last Pas-de-deux of Part II, pp. 65-71 in the pocket score. Use of the row is very tentative and haphazard, and only isolated fragments of the series are used. If it were not for the later Four Duos it would not be possible to construct a twelve-note series from the material given. It is not unreasonable to suppose that the row ideas of the later movements either grew out of, or were consciously constructed from, the early material written in 1954 before Stravinsky became committed to serial composition. At any rate, it is easy to demonstrate the relationship now, with the advantage of hindsight.

The violin solo in bar [414] begins with the first three notes of the retrograde inversion of Row III. Skipping to [417], notes #4-#7 of the original series now appear in the violin part. Beginning with the last note in [420], a Bb, we now get about half of the retrograde inversion, apportioned among the three instruments playing at the time in the following manner:



In bars [424] and [425] the solo violin plays notes #5-#9 of the O_7 series. In [427], reading down the pyramided string

entries, we get #4-#9 of the RI_1 series.

The first half of the movement is constructed roughly in the fashion described above. Small cells from the various serial orders are used quite freely, alternating with even more free (i.e. serially unidentifiable) material. The technique recalls that used in the second Shakespeare Song, "Full fadom five." In bars [457]-[462] the series are used to construct vertical sonorities in the strings, though again only fractions of any given order are employed. It is possible to pick out a complete series by skipping around, though the validity of this is open to question.

The last half of the movement (containing the sections marked "Male Dancer," "Female Dancer," and "Male Dancer-refrain") is not derived from any of the twelve-tone series used in Agon. Instead, an independent eight-note series is introduced by the French horns and piano in bars [463] to [472], then recapitulated in a retrograde inversion form in bars [484]-[493].

The Coda of Part II is fairly strict serially, but the series are still fragmented. The treatment of the series is very similar to that in the Four Trios, except that the texture is less complex. Every note in these two pages can be accounted for serially, but as there is nothing new or striking in the plan there is no need to reproduce it in full.

The Quasi stretto that introduces Part III is a one-page composition that looks deceptively complicated but is,

in reality, quite simply constructed. Only three serial statements occur: O_7 (7-12), R_7 (1-7), and R_1 (1-7). But these are apportioned among twelve different instrumental lines in a disposition that looks strikingly Webernesque. The rhythmic vitality of the page is quite unlike Webern, however. A more apposite comparison could probably be made with a page of one of Pierre Boulez' orchestral scores, for example Le soleil des eaux.

The Prelude and two Interludes in Part II are musically almost identical, being based on the same five-tone series that just narrowly misses being a traditional pentatonic scale of the Orient: C-D-F-G-B. The serial treatment in these pieces consists almost entirely of augmentation, stretto, and fractionalization. Inversion, retrogrades, and retrograde inversions are not employed. A glance at the score will reveal immediately the constructional technique. The serialization, which applies only to certain instruments, consists in limiting the material of these instruments for a time to a few restricted notes--either the five given above or a derivation thereof. Stravinsky has used this device before as we have seen,[20] in such pieces as the Five Fingers and the Trois pièces pour quatuor à cordes.

The only movements remaining in the piece now are the three in Part I, which is not serially ordered. Certain motivic phrases in these opening movements are incorporated into the later twelve-note series or hexachords, which helps

to unify the seventeen-odd movements. Standard contrapuntal techniques of inversion, retrograde, cancrizans, etc. are employed, but there is no attempt at serial strictness, and it would be wrong to think of these movements as "serial" pieces. Vlad has traced the motivic relationships between the first three movements and the rest of the piece in fairly great detail, but his arguments are not always convincing because they are heavily weighted in favor of a serial interpretation whether or not the music seems to fit (vide, for example, his extraction of a twelve-tone series and a hexachord from the material of the Double Pas-de-quatre, which is demonstrably not serially composed).[21]

The music of Agon, to sum up, is brilliant, effective, and exciting in the tradition of the Firebird and Petrouchka. When combined with the Kirstein-Balanchine choreography its appeal is irresistible, for it makes a stunning theater-piece. Though the Canticum Sacrum is demonstrably superior in design, scope, organization, unity, and logic, the sheer élan of Agon should assure its success. All of which is not to urge the rule of vox populi, but rather to serve as a warning to the militant polemicists and prophets of orthodox serialism (whatever that may be) who refuse to admit the possibility of a musical world other than their own narrow one.[22] A truly great composer, which Stravinsky undeniably is, would rather trust his ears than his eyes, "la matière sonore" rather than la matière visuelle, to paraphrase Stravinsky's own words.

FOOTNOTES TO CHAPTER III

1. Roman Vlad, Stravinsky, trans. Frederick and Ann Fuller (London: Oxford University Press, 1960), p. 185.

2. Ibid.

3. Robert Craft, "A Concert for St. Mark," The Score, No. 18 (December, 1956), pp. 35-45.

4. A few adjustments are made in dynamics and in the disposition of the parts, but otherwise the retrograde, for all practical purposes, may be considered exact.

5. Vlad (op. cit., p. 189) sees movements I and V related as the "musical embodiment of the commandment; II and III as the dual nature of love, earthly love, and heavenly love, as in the 1952 Cantata; III and IV as the unity of Faith in society and in the individual."

6. Craft, op. cit., p. 36.

7. Columbia Recording ML-5215, Canticum Sacrum and Agon.

8. Stravinsky's footnote on p. 26 of the orchestral score.

9. Roberto Gerhard, "Twelve-note Technique in Stravinsky," The Score, No. 20 (June, 1957), p. 38.

10. Craft, op. cit., p. 37.

11. Vlad, loc. cit.

12. Specifically, the Latin perfect tense is used, though Vlad does not identify this one.

13. Robert Craft, Notes for Columbia Recording ML-5215.

14. Lawrence Thomas Fredrickson, "Stravinsky's Instrumentation: A Study of his Orchestral Techniques" (unpublished D.M.A. thesis, Graduate College, University of Illinois, 1960), p. 102.

15. Igor Stravinsky and Robert Craft, Conversations with Igor Stravinsky (Garden City, N.Y.: Doubleday and Company, Inc., 1959), p. 29.

16. Vlad, op. cit., p. 201.

17. Vide for example Edmund Bowles, "Haut and Bas: The Grouping of Musical Instruments in the Middle Ages," Musica Disciplina, VIII (1954), p. 115 ff.; or Andre Pirro, "Remarks on Musical Performance From the End of the 14th Century to the Middle of the 15th Century," a Report to the International Society for Music Research, First Congress (Liège: 1930).

18. Cf., for example, the use of the harp and English horn in bars [86]-[93] of Surge, aquilo; or the scoring of the retrograde inversion in the four bars at the beginning of the Brevis Motus Cantilenae (measures [250]-[253]).

19. Vlad, op. cit., pp. 207-208.

20. Supra, p. 36 (footnote #21).

21. Vlad, op. cit., pp. 202-203.

22. Typical is Vlad's appraisal of the Canticum: "It is highly significant that this synthesis should bear the hallmark of dodecaphony, thus showing once again the essential unifying power of the new system." (Pp. 185-186.)

CHAPTER IV

TOTAL TWELVE-NOTE SERIALISM

Threni

Threni--the "Lamentations of the Prophet Jeremiah"--is a large work for chorus, six soloists, and orchestra, and continues the tradition of the Symphony of Psalms, the Mass, and, most recently, the Canticum Sacrum. In many respects it is the culmination of Stravinsky's serial tendencies that began in the Cantata of 1952, written just six years before Threni. The Canticum, though highly organized, was serially ordered only in its three central movements, while Agon was a serial hodge-podge that employed three different twelve-note rows, two different hexachords, and much free material. The entire music of Threni, however, comes from a single twelve-note series, and this places Threni in the same relationship vis-a-vis Agon and the Canticum as In Memoriam Dylan Thomas stood vis-a-vis the Septet, the Three Shakespeare Songs, and the Cantata which was the beginning of it all.

The formal structure of Threni resembles that of the Canticum Sacrum in some details. There are three principal movements, of which the second is subdivided into three main

sections, recalling the central movement of the Canticum. Though the latter piece has five movements, both pieces are symmetrically organized.

The original series is stated on the first page of the score simultaneously with its inversion. Identification from the initial statement is not possible because of the vertical complexity of the instrumentation. Linear statements of the retrograde and the retrograde inversion by the soprano and alto soloists on the next two pages provide the necessary reference for pin-pointing the series on the first page, however. Consistent with traditional serial procedure, the writer called the first serial statement of the piece O_1, working backwards from the soprano solo which was considered the retrograde. After the analysis of the piece was completed, Roman Vlad's book--the latest on Stravinsky--became available, in which we are told that Stravinsky's "first thematic idea for the entire work had no connection with either of the two series [on the first page], but consisted of the phrase (bars 6-18) in which the soprano soloist announces the beginning of the Lamentations."[1] Vlad therefore calls this O_1, and his analysis (which is perfunctory and superficial from the strictly serial standpoint) proceeds on that basis. There seems little reason for the writer to change his terminology to agree with Vlad's, however, since other analysts as well--not having the advantage of the Composer's ear--have agreed independently on the identification of the basic series, with

which the present writer concurs.[2] Let it be understood, of course, that it is the relationship between the various orders that is important, not the arbitrary naming of the orders. For, in the words of Milton Babbitt,

> the identification of the "prime" set in a given composition is not a meaningful task, since the property of "primeness" is not an immanent one, but a relational one; thus, the designation of a particular set form at a specific transpositional level as "prime" is, analytically, usually determined by temporal priority or emphasis, since the closure and symmetry properties of the system assure that the musical relationships remain unaltered, regardless of the choice of the "prime" from the, normally, forty-eight possible compositional sets.[3]

Here, then, are the basic series as determined by the writer:

Note that the series contains four perfect fourths and/or fifths. It is even more harmonically oriented than the series in the Canticum Sacrum.

The first page of Threni, scored for woodwinds and strings, is one of the most intricate pages in the entire piece. The basic series is found in the oboes, English horn, and first violins, although the cellos and second flute also contribute. Clarinets, low strings, and flutes are entrusted with the inversion. The first note of the English horn and the last note of the second oboe on that page also belong to the inversion. The violas link the two orders, alternating notes from each series. The last three notes of both forms are found on the next page--O_1 in the oboes and English horn (bar [5]), I_1 in the clarinets and cellos, which have the last note of the series in bar [5]. At this point the two female soloists enter--the soprano with the retrograde, the alto with its mirror, the inverted retrograde. It is clear that Stravinsky obtained the latter form not by retrograding the inversion ("RI") but by inverting the retrograde ("IR"),[4] since the second and fourth serial statements are mirror inversions at the unison of the first and third (i.e. O_1 followed by R_1; I_1 followed by IR_1). Therefore values of this form will be given in terms of IR rather than RI throughout the piece.

The instrumental accompaniment to the solo voices mentioned above consists of a statement of O_1 in the first oboe (ending in the clarinets in bars [14] to [18]), O_{10} in the second oboe (ending in the English horn, bars [17] and [18]), I_{10} in the English horn, bass clarinet, and Bb clarinets, and I_1 in the three trombones, with the bass clarinet doubling four notes of the series in bars [15]-[18]. The harp, meanwhile, articulates various notes of the soprano solo. These three pages (eighteen measures) constitute the introduction to the first movement, De Elegia Prima, which begins in measure [19], page four of the orchestral score.

The first four bars of the "First Elegy" consist entirely of the prime inversion, distributed among the chorus and the string section. Clarinets, bugle, tuba, and lower strings answer with a Webernesque statement of IR_1. The last two notes of this series (C and C#) are held as a pedal for the chorus, which recites the first verse of text as a speaking chorus, punctuated by rhythmic orchestral repetitions of the last two notes of the IR_1 series. In measures [33]-[35] the horns, clarinets, strings, piano, and sarrusophone play a pointillistic interlude consisting of a statement of IR_7 [RI_1?]. The chorus continues its recitation over a horn pedal and sarrusophone/piano punctuations taken from the last three notes of IR_7. So far, three forms of the series (I_1, IR_1, IR_7) have sufficed for three and a half pages of this movement.

At this point (measure [42]) the chorus begins a recapitulation of its text, but this time set to music. The

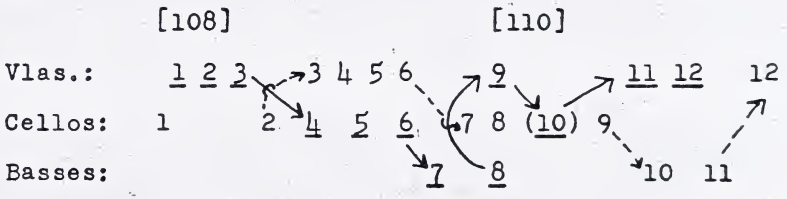
chorus sings I_7, the bugle (in reality a fluegelhorn) plays the original series, and the solo tenor sings the bugle line in a free augmentation. Upper strings provide an ostinato accompaniment consisting of three notes borrowed from the chorus' series. There are five complete statements of O_1 in the bugle to two in the tenor, and two statements of I_7 in the chorsu. In bars [62]-[65] where the Hebrew letter Beth is intoned the female half of the chorus sings the basic series while the male half sings I_5, aided by pizzicato strings. The women's chorus borrows notes #6 and #11 (D and Ab) from the male chorus; otherwise each side keeps to itself.

The two solo tenors sing the first of a series of interludes--this one labeled "Diphona I"--in the unmetered bars [66] and [67]. The first tenor sings O_1 and I_1 respectively while the second tenor sings IR_1 and R_1.

Measures [68]-[72] contain the choral intonation of the Hebrew letter He, which is set to the series R_8. The strings and bass trombone accompany with a statement of IR_1 which borrows two notes--#6 and #12 (A and C)--from the chorus. Clarinets, trombones, piano, and lower strings repeat the IR_1 alone, the sixth note of which is missing because there is no chorus to borrow it from. Bars [73] to [108] are an exact serial recapitulation of the first part of the movement after the choral intonation up to the intonation just described (bars [23] to [68]).

The next four measures [108]-[111] contain the choral intonation of Caph accompanied by a rather dense serial layer

in the strings. The violins play a straightforward version of R_{12}, borrowing a B (#10) from the sopranos. But the violas, cellos, and basses are so intertwined in their statements of IR_{12} and I_7 that it is necessary to graph them in order to clarify the passage. Notes belonging to the IR_{12} series below are underlined:



Only one note is required to double in both series--the cello E# in bar [110] that functions as both #8 in I_7 and #10 in IR_{12}. The choral parts are serially subordinate this time, and consist of articulations of various notes in the R_{12} and I_7 series.

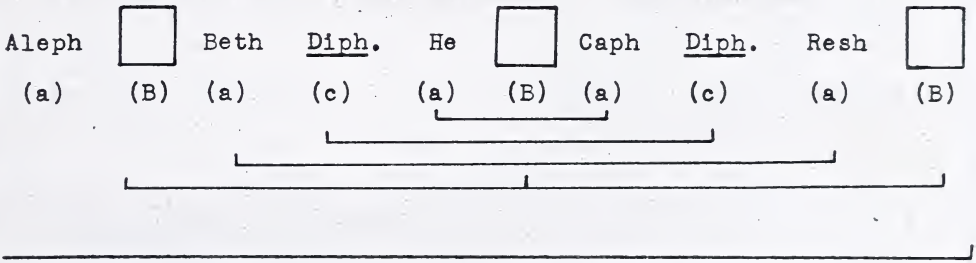
An interlude--"Diphona II"--follows for solo tenors in bars [112] and [113]. The first tenor sings O_{12} and IR_1 over the second tenor's R_1 and I_{12}.

Four simultaneous, linear serial statements in the strings accompany the next intonation--Res(h) [sic]. The first violins play R_4, the secons IR_4, the violas O_1, and the cellos I_1.

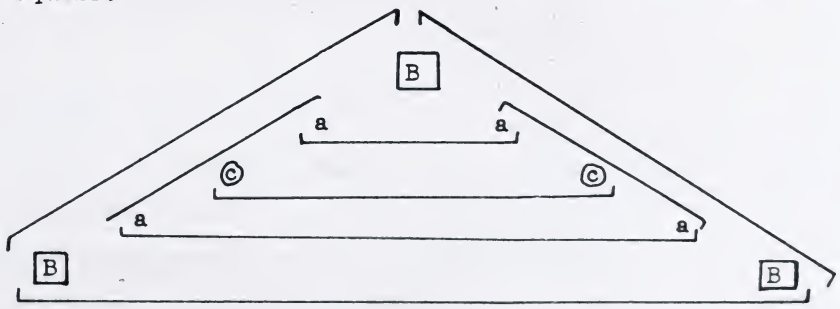
The movement concludes with a recapitulation of the

first part of the piece--the same bars [23]-[68] that were recapitulated in bars [68]-[108]. The tenor-bugle duet is extended slightly this time, however: there are seven statements of O_1 in the bugle compared with five in the two previous statements, and three of O_1 in the tenor instead of two.

The plan of the movement, then, consists in three statements of a large thematic block (scored mostly for bugle, tenor solo, chorus, and strings, with rhythmic punctuations by the lower instruments of the orchestra) alternating with choral intonations of the Hebrew letters and the tenor Diphonae. The arrangement of these elements is symmetric:



which equals:



(a) (a) [next mvt.]

This plan recalls the structure of the central movement of the Canticum. The opening intonation--Aleph--could be considered either introductory (which is its function) or as leading to the next movement, De Elegia Tertia, which also opens with an intonation of Aleph. Neither interpretation interferes with the symmetric design of the movement.

The middle movement, De Elegia Tertia, is divided into three large sections--Querimonia, Sensus spei, and Solacium. The over-all plan of the movement consists simply in the alternation of the chorically-intoned Hebrew letters with different combinations of voices and instruments. Fifteen letters of the Hebrew alphabet are used, and each is sung three times. Each repetition of a letter is followed by the same orchestral or vocal combination. A block sketch of the first section will make this clear:

1. Querimonia:

Aleph Bass II Aleph B-II Aleph B-II

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[175]

Beth Tenor-Bass Beth T-B Beth T-B

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[179]

Vau	Ten. Bass Bass	Vau	Ten. Bass Bass	Vau	Ten. Bass Bass

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[188]

Zain	TTBB	Zain	TTBB	Zain	TTBB

The Querimonia, then, could be summarized as consisting of four main strophic parts, each part of which is composed of three subsidiary binary strophes.

Serially, the Hebrew intonations are a problem. Sometimes they complete a series begun in a solo part, but more often they are put together out of serial odds and ends. The first intonation of Aleph, for example, consists of two vertical sonorities, the first of which contains the first four notes of IR_1, the second the last three notes and the first note of IR_8. The second Aleph contains notes #1-#5 plus the odd notes #8 and #11 from IR_7. The third Aleph supplies the last four notes of the inverted retrograde missing from the bass solo above, plus some extra notes. The first two intonations of the next letter, Beth, together provide all the notes but two of I_{11} or, read another way, the first intonation

contains the first hexachord of IR_7 plus the ninth note. The problem of exact identification is obvious, since the fragments can belong to any of a number of serial orders. With but few exceptions, the intonations are apparently autonomous, there being no attempt at systematic serial ordering from letter to letter. These passages, then, may be considered to be freely composed from the serial source-material at hand, the exact disposition of notes being no doubt determined by their purely acoustic qualities.

The serial plan of the Querimonia, with the above exceptions, is simple and uncomplicated, and is given herewith:

1. Querimonia:

["Monodia"]

Aleph Bass--I_1 (3-12, 1-2), R_1 (4-12, 1-3) Aleph Bass--O_1

Bass--IR_1 (1-8) Aleph--IR_1 (9-12) Bass--O_1

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[173] ["Canon a 2"]

Tenor: R_1 (2-12, 1) IR_7 (2-12, 1)

Beth Beth

Bass: R_7 (2-12, 1) IR_{11} (2-12, 1)

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[176]

Tenor: IR_9 (3-12, 1-2) R_2 (4-12, 1-3) I_7 (3-12, 2-1)

Beth

Bass: IR_1 (3-12, 1-2) R_1 (4-12, 1-3) I_1 (3-12, 2-1)

Tenor: IR_8 (5-10, 1, 7, 11, 4, 2, 3)

Bass: IR_2 (5-10, 1, 7, 11, 4, 2, 3)

[Note #5 in both series overlaps with the last in the preceding; note #12--missing in both--could come from the penultimate note in the preceding series, crossing parts.]

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[179] ["Canon a 3"] [181]

Tenor: O_3 (9-12, 8-7) R_1 (8-12)

Vau Bass I: O_{10} (9-12, 8-7) R_8 (8-12) Vau

Bass II: O_5 (9-12, 8-7) R_3 (8-12)

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[182]

Tenor: R_3 (5-12, 4-1) I_5 (6-12, 5-1)

Bass I: R_8 (5-12, 4-1) Vau I_1 (6-12, 5-1)

Bass II: R_1 (5-12, 4-1) I_9 (6-12, 5-1)

[188] ["Canon a 4, duplex"] [190]

Ten. I: I_9 (10-12, 1-9)

Ten. II: I_5 O_5

Zain Zain

Bass I: I_1 (10-12, 1-9)

Bass II: I_{10} O_{10}

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[192]

Ten. I: I_8 I_{11}

Ten. II: R_7 O_5

Zain

Bass I: R_{11} O_{11}

Bass II: I_{11} I_2

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[193]

Ten. I: O_{10}

Ten. II: I_7 (7-12, 1-6)

Bass I: I_1 (7-12, 1-6)

Bass II: O_9

The construction of the serial canons is remarkable for the number of harmonic consonances that result. Not only are the vertical sonorities rich in thirds and sixths, but in perfect intervals as well. Note, for example, the four perfect-octave doublings that occur within the first eight tactus beats in the last strophe (bar [193]); or the preceding strophe (bar [191]), which is rich in fourths and fifths. "Dissonant" intervals--i.e. minor seconds, major sevenths, augmented octaves--are usually treated as such, resolving (often by leap) to "softer" dissonances, such as the major second, minor seventh, or out-and-out consonant intervals. This is of immense help to the singers, of course--as well as to the audience. This emphasis upon the traditional consonances is one factor that distinguishes Stravinsky from most other serial composers, as, indeed, it distinguished the pre-serial Stravinsky in his concern with the vertical sonority from most of his contemporaries, whatever the style.

The second section of the movement, Sensus spei, is more complex than the Querimonia. The setting of the first two phrases of the text (bars [194]-[196]), scored for chorus, soloists, flutes, sarrusophone, horns, and trombone, requires only notes #1-#11 of the IR_1 series; #12 serves for the start of the third text phrase. As a general rule the principal serial statements occur in the vocal parts, the orchestral lines consisting mostly of articulations or pedal points drawn from the prevailing series. The following abstraction

of the serial plan will deal mostly with complete statements of serial orders unless the orchestral parts happen to be of especial significance. The derivation, in most cases, is clear anyway once the principal statements are located and identified.

2. Sensus spei:

[200]

Soloists: Heth (IR_1, 1-4) Heth (IR_1 1-4) Heth

Chorus: IR_1 I_1 (3-12, 1-2) IR_1 I_1

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[204]

Solo alto: IR_3 (1-4) IR_3 (1-4)

Solo tenor: I_{11} (3-8, 11, 10, 12) [= R_{10}, 5-12]

Bugle, tuba, tenors, basses: Teth (I_{11}, #1) Teth

Clarinets: IR_1

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[217]

Solo alto: IR_3 (1-4)

Solo tenor: I_{11} (3-8, 11, 10) [=R_{10}, 5-12]

Male chorus: Teth Lamed (I_{10}, 3-5)

Clarinets; IR_1

[219]

Male chorus:	Lamed	Lamed	
Solo tenor:	IR_{12} (5-12)	IR_{12} (5-12)	IR_{12} (5-12)
Clarinets:	I_{12} (1-3, 5-12)	I_{12} (1-3, 5-12)	I_{12} (1-3,5-12
Solo bass:	R_8 (1-4)	R_8 (1-4)	R_8 (1-4)

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[231]

Sopranos, 1st altos:	O_1	O_1		I_1
2nd altos, tenors:	IR_1	IR_1		I_1
Basses:	Nu-n	Nu-n	Nu-n	I_1
Trbs., cel., vlas.:	R_1 (7, 9-10 in cello)	R_1		[+ soloists]
Vc., basses, clars.:	I_1	I_1		

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	[246]	[252]	
S-A:	R_1 (7-12)	O_1 (7-12)	
T-B:	Samech	Samech	Samech
Solo ten.:	O_1 (1-6)	I_1 (1-6)	I_1 (1-5), O_1 (1-6)

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[255]

S-A:

Ten.: IR_1 (1-8) [#9 overlaps in bass]

Bass, timp.: O_{10} (9-11) (2-4) IR_8 (4-9) R_1 (5-7) I_8 (4-6) I_{11}

Trb., cello, bass, sarrus.: R_4 (5-12, 1-4) [#5 borrowed from tenor]

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[261]

Chorus: Ain Ain Ain

Soloists: O_{10} (1-12, 1-3) O_{10} (1-12, 1-3) O_{10} (1-12, 1-3)

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[282]

Male chorus: Tsade Tsade Tsade

Sop.: O_1 IR_i

Alto: I_1 R_{12} I_{12}

Ten.: O_6 IR_4 R_{12}

Bass: IR_2

[Voices divisi]

[309]

R_1 (9-11)
I_{11} (1-3)
IR_1 (9-11)
O_6 (1-3)
O_8 (9-11)
IR_7 (5-7)
R_6 (7-9)
IR_1 (1-3)

[310]				[321]	
Sop.:	O_2	O_2		Sop.:	R_1 (9-12)
Alto:	IR_2	IR_2		Alt. I:	I_{11} (1-4)
Ten.:		IR_2		Alt. II:	IR_1 (9-12)
Bass:			IR_2	Ten. I:	O_6 (1-4)
Cello:	R_2	R_2		Ten. II:	O_6 (9-12)
Male chorus:	Co-ph	Co-ph	Co-ph	Bass I:	O_{12} (3-6)
				Bass II:	R_5 (9-12)
				Bass III:	IR_1 (1-4)

Bars [204]-[211] pose a special problem. The I_{11} reading of the solo tenor part (bars [207]-[211]) is awkward as it stands, with the notes occurring in the order #3-#8, #11, #10, #12. The first two notes of the series can be taken from the E of the Teth intonations and the F in the alto part (first note, bar [205]), both of which precede the tenor solo. A more convincing reading of the tenor line would be R_{10} (5-12), which fits it exactly; but the problem then is what to do with the note G in bar [211], which is #4 in the series. One looks for the first three notes, which can be borrowed from the alto part

(C and F) and the bugle and tuba pedal-E, which has been sustained all this time. The complete line would then read R_{10} (5-12, 1-4). Neither interpretation is entirely satisfactory, obviously; probably the safest thing to do would be to simply call the tenor part R_{10} (5-12, 4) and let the rest of the series go, since the notes that have been borrowed all have their own serial function.

In measure [217] the choral intonation of Lamed followed by the soprano doubling of the solo bass's first note can be read as notes #3-#5 in I_{10}. The I_{12} statement in the alto and bass clarinets lacks the fourth note of the series, a G, which can't be borrowed from any neighboring line.

The passage of greatest serial complexity in the movement is to be found in bars [257]-[259] in the solo bass part. Five orders overlap, each having three notes except the last, which has six. The orders are identified in the chart above. Of greatest musical interest, perhaps, are the choral cadences in bars [309] and [321], which consist of simultaneous statements of three, then four, consecutive notes from eight different serial orders, stated by eight-part divided chorus and soloists.

The third section of the movement, Solacium, resembles the first section (Querimonia) in organization and form. These two outer sections serve as a frame for the large central section (Sensus spei) just discussed. The intonations and responses are arranged in this fashion:

3. Solacium:

Res(h)	S A	Res(h)	S A	Res(h)	S A	Sin	T B Hns.	Sin	T B Hns.

[348]		[358]							
Sin	T B Hns.	Thau	SS AA TT BB	Thau	SS AA TT BB	Thau		SS AA TT BB	

Note the resemblance to the first section, Querimonia. Note also that the central section is just about twice as long as either of the outer sections, or equal approximately to the sum of the outer sections. This kind of arrangement is apparently a favorite one of Stravinsky's, as we have seen.[5] In the Querimonia, the choral intonations were invariably accompanied by trombones with or without bugle; in the Solacium the accompanying sonority is invariably the string section minus the basses. In contrast, the accompanying group in the Sensus spei varies between different combinations of instruments. Exact serial identification of the Hebrew intonations and accompaniments again presents problems. In measures [327] and [328], for example, all the notes of the chromatic scale are present save one (F#), and

since the exposition is vertical it is impossible to do more than guess at the serial order it is meant to represent. On the other hand, even when precise identification is possible more questions are often left unanswered than are answered. The very first sonority in the Solacium is a four-part string chord containing the first four notes of IR_1 reading downward; notes five and six are in the second sonority under the choral Res(h) in the second violins and violas; the remaining three notes of the chord can be identified as #8-#10 of I_9. Neither order is continued. This is doubtless another example of musical intuition taking precedence over serial logic in Stravinsky, and there is no reason why it should not be so, if the tail is not to wag the dog.

Also of unusual interest are the passages in parallel thirds in the clarinets that Stravinsky is able to evolve from his basic series. The first clarinet plays notes #3, #5, #7 of I_2 in bar [323] while the alto clarinet plays notes #4, #6, and #8, creating parallel major and minor thirds. The series is completed by the oboes, the first of which plays notes #11, #9, #1 while the second plays #10, #2, #12. The upper line contains all the odd notes of the series, the lower line the even notes. The remaining four notes in the oboe parts consist of the first four notes of the original retrograde. A similar passage in bars [325]-[327] has the alto clarinet playing #1, #3, #5, #7, #10 of I_7 while the bass clarinet

plays notes #2, #4, #6, #8, #9; the flutes complete the series, adding notes #12 and #11. The basic serial plan of the Solacium can be outlined as follows:

[329]

Ww.:	I_2	R_1 (1-4)	I_7	I_2	R_1 (1-4)	I_7	
Sop.:	O_1	IR_1		IR_1	I_1		
Alto:	IR_1	O_6		I_8	IR_8		
T-B:	Res(h)			Res(h)			

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[336]

Oboes:	I_2 (1-2, 9-12)	R_1 (1-4)		
Clars.:			I_2 (3-8)	I_7
Sop.:	O_{12}		I_4	
Alto:	IR_3		R_{12}	
T-B:	Res(h)			

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[344]

Ten.: I_1 (1, 3, 5, 7, 9, 11; 12, 10, 8, 6, 4, 2)

Bass: O_1 (1, 3, 5, 7, 9, 11; 12, 10, 8, 6, 4, 2)

Horns: O_1 (1, 4, 7, 10, 2, 5, 8, 11, 3, 6) [9, 12 in stgs.]

S-A: Sin Sin

At this point (bar [349]) the solo tenor and bass exchange series, each time skipping a note forward, then backward, while the horns play the same serial pattern (skipping two notes forward each time until the series is complete) in the inversion. The third iteration of Sin (bar [353]) employs notes #9-#12, then #1 and #2 of the inversion, followed by a strophe in the tenor, bass, and horns serially identical to their preceding passage. This brings us up to the next intonation, Thau.

	[358]		[367]	
Chorus:	Thau		Thau	
Sop., ten.:	R_{12}	I_{12}	Sop.:	R_3
Altos:	IR_{12}		Alt., bass:	R_1 I_1
Basses;	O_1	IR_{11}	Ten.:	I_1 I_7 (7-12) (7-12)

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[376]

Chorus: Thau

Sop., ten: I_{10} (2, 6, 8-10, 5, 1, 4, 11-12) [?] I_2

Altos: I_7 (1-4) O_7 (5-12)

Basses: IR_{11} (1-4)----------

De elegia quinta, the last movement, is short like the first movement, De elegia prima. Lacking the Hebraic intonations, it more properly resembles the three-page introduction in some sense than the De elegia prima, to which it seems to be the counterpart. The orchestral technique of the first half of the movement, like that of the De elegia prima, is serially uncomplicated, one order at a time being split up among the orchestral forces. The last half of the movement (where the French horns enter), however, contains the most complex pages to be found in Threni. A serial outline of the entire movement is given below:

De elegia quinta: [395]

Soloists: IR_7 (1 in b-cl.) I_9

(Bass I): IR_1

(Bass II): R_1

Orch.: O_2 R_7 R_1

	[405]	[412]
Sop.:	[random series]	O_1 (1-4,8,6-8,4,10,2,9,12)
Alto:	IR_1 (1-3,7,5,6,11,9,7,10)	R_1 (1-2,11,4,5,8,5-7,11,2, 10-12)
Tenor:	[random series]	I_7 (1-7, 10, 11, 9, 12)
Bass:	I_1 (7, 2-9, 2, 10, 12)	IR_7 (1-2, 11, 4-8, 2, 10-12)
Horn I:	I_{10}	R_4 (1-8) IR_1 (9-12)
Horn II:	IR_1 (2-3)	I_1 (2-5), IR_1 (7-8), O_{10} (10-12)
Horn III:	I_3 [12 in harp]	IR_1 (4-6), O_{10} (4-10), R_4 (8-12)
Horn IV:		O_{10} (1-4), I_1 (6-12)

[IR_1 (1)] [I_4 (1-4)]

The intricate criss-crossing of parts that occurs from [412] to the end of the piece can only be roughly indicated on paper. The aberrations that occur in the listed serial orders are the result of this criss-crossing. It is possible to trace each series from beginning to end in proper order by skipping around in the vocal parts, with no notes left over or unaccounted for. The horn parts are less complex than the vocal parts because the serial crossing usually involves large sections of the row rather than individual notes. These eight bars are, in Vlad's

words, "the climax of structural complexity and polyphonic cohesion."[6]

Looking over an annotated score of Threni one gets the impression that there is much that is serially capricious. The feeling is unmistakable that Stravinsky was beginning to chafe under the self-imposed limitation of composing a major work from one single twelve-note series. How much more logical and convincing is a work like the Canticum Sacrum, whose inner movements only are serially strict. The serial writing in that composition is straightforward and consistent, and seems genuinely motivated from within; whereas the composition of Threni engenders the suspicion that Stravinsky may have approached it as a sort of gageure, or as an intellectual problem to be solved if possible, or to be solved in any way possible. The feat of composing a large work from one twelve-note series is no small one, and is not to be minimized. But other composers have done it before Stravinsky, and with more ease. "Total organization" may be more symbolically admirable on paper, but pieces like Agon and the Canticum are aurally much more convincing and satisfying than the idiomatically consistent Threni.

FOOTNOTES TO CHAPTER IV

1. Vlad, op. cit., p. 214.

2. E.g. Nadia Boulanger (in her analysis class, Paris, 1958-1959), John Weissmann (in "Current Chronicle," Musical Quarterly, XLV, No. 1 [Jan., 1959], pp. 104-110).

3. Milton Babbitt, "An Introduction to the Music," Notes for Columbia Recording K3L-241: Arnold Schoenberg, Moses und Aron.

4. For a discussion of this problem vide supra, pp. 53-54.

5. Cf. with the In Memoriam Dylan Thomas and the Canticum Sacrum (supra, pp. 50-51, 58). Note the similarity in the symmetric arrangements of the movements.

6. Vlad, op. cit., p. 221.

CHAPTER V

NEW DIRECTIONS

Movements for Piano and Orchestra

Discounting Agon, which is a ballet, and Threni and the Canticum Sacrum, which are primarily vocal works, Movements for Piano and Orchestra was Stravinsky's first major instrumental composition since the Septet. It was commissioned by the pianist Margrit Weber, to whom it is dedicated, and is dated 1958-59. The piece consists of five short movements separated by four brief interludes, containing in all a total of 193 measures. Stravinsky's own comments are a useful prelude to analysis, and will serve to indicate somewhat the scope of the piece:

> I have discovered new (to me) serial combinations in the Movements for Piano and Orchestra, however (and I have discovered in the process, too, that I am becoming not less but more of a serial composer; those younger colleagues who already regard "serial" as an indecent word, in their claim to have exhausted all that is meant by it and to have gone far beyond, are, I think, greatly in error), and the Movements are the most advanced music from the point of view of construction of anything I have composed. No theorist could determine the spelling of the note order in, for example, the flute solo near the beginning, or the derivation of the three Fs announcing the last movement simply by knowing the original order, no matter how unique the combinatorial properties of this particular series. Every aspect of the composition was guided by serial forms, the sixes, quadrilaterals, triangles, etc. The fifth movement, for instance (which

I had to rewrite twice), uses a construction of twelve verticals. The gamma and delta hexachords in this movement are more important than the alpha and beta, too. Five orders are rotated instead of four, with six alternates for each of the five, while, at the same time, the six work in all directions, as though through a crystal.

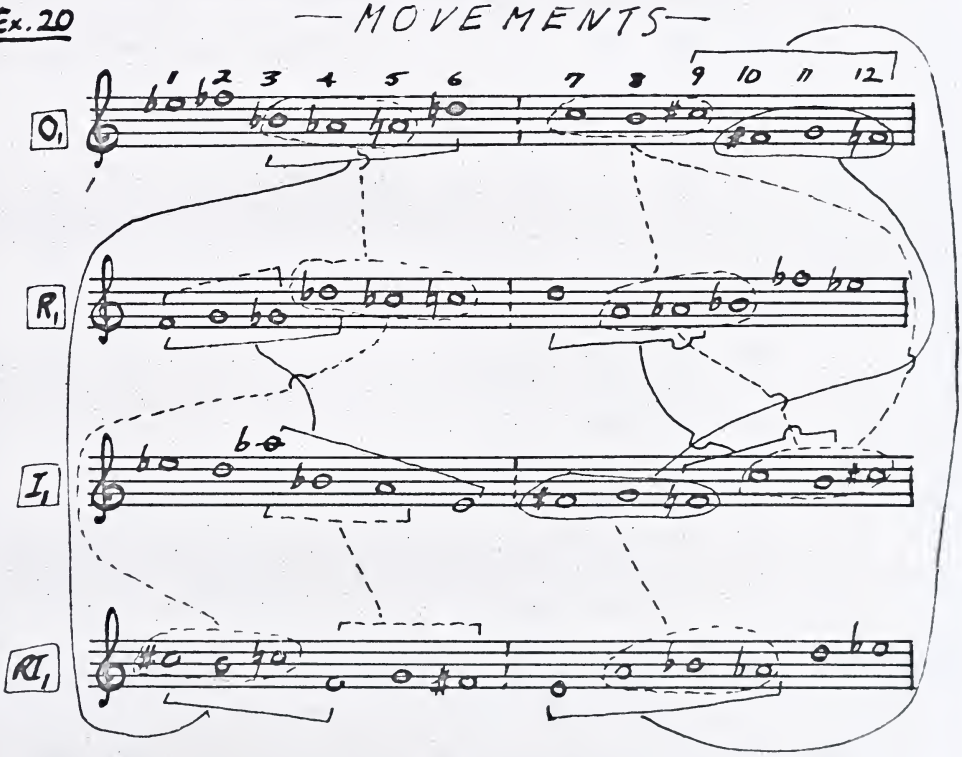
Now that I have mentioned my new work, I should add that its rhythmic language is also the most advanced I have so far employed; perhaps some listeners might even detect a hint of serialism in this too. My polyrhythmic combinations are meant to be heard vertically, however, unlike those of some of my younger colleagues. Though parallels are not equivalents, look at Josquin for a parallel: that marvelous second Agnus Dei (the three-voice one) in the Missa l'Homme armé, or at Baude Cordier's pour le deffault du dieu Bacchus, or, for even more remarkable examples, at the Cyprus Codex.

Each section of the piece is confined to a certain range of instrumental timbre (another suggestion of serialism?), but the five movements are related more by tempo than by contrasts of such things as timbre, "mood," "character"; in a span of only twelve minutes, [1] the contrast of an andante with an allegro would make little sense; construction must replace contrast. Perhaps the most significant development in the Movements, however, is the tendency toward antitonality--in spite of long pedal point passages such as the clarinet trill at the end of the third movement, and the sustained string harmonics in the fourth movement. I am amazed at this myself, in view of the fact that in Threni simple triadic references occur in every bar.[2]

I have quoted rather extensively from Stravinsky for the simple reason that his remarks are more illuminating than anyone else's re Movements. As one might guess from reading the above, the complexity and ambiguity of the last few pages in Threni, plus a few other hints throughout the score, have now become a modus operandi for Stravinsky. Complicating matters further, the intervallic patterns of the triangles and quadrilaterals Stravinsky refers to are reproduced often in as many as three different serial orders. One can only be positive

in identification, for the most part, when at least five successive notes from the same order occur and, as Stravinsky implies above, this rarely happens. A glance at the basic series, with the overlapping triangles and quadrilaterals indicated, will give some indication of the problems involved:

Ex. 20



In view of the extreme complexity of this work and the excessive fragmentation of the serial orders, a complete block diagram of the forty-eight possible compositional sets, indicating all transpositions, might be of aid in following the analysis:

	I_1	I_2	I_8	I_6	I_7	I_{12}	I_{10}	I_9	I_{11}	I_4	I_5	I_3	
O_1:	Eb	Fb	Bb	Ab	A	D	C	B	C#	F#	G	F	--[R_1]
O_{12}:	D	Eb	A	G	G#	C#	B	Bb	C	F	F#	E	--[R_{12}]
O_6:	Ab	A	Eb	Db	D	G	F	E	F#	B	C	Bb	-[R_6]
O_8:	Bb	B	F	Eb	E	A	G	F#	G#	C#	D	C	---[R_8]
O_7:	A	Bb	E	D	Eb	Ab	Gb	F	G	C	Db	Cb	--[R_7]
O_2:	E	F	B	A	Bb	Eb	Db	C	D	G	Ab	Gb	--[R_2]
O_4:	F#	G	C#	B	C	F	Eb	D	E	A	Bb	Ab	--[R_4]
O_5:	G	G#	D	C	C#	F#	E	Eb	F	Bb	B	A	---[R_5]
O_3:	F	F#	C	Bb	B	E	D	Db	Eb	Ab	A	G	---[R_3]
O_{10}:	C	C#	G	F	F#	B	A	Ab	Bb	Eb	E	D	--[R_{10}]
O_9:	B	C	F#	E	F	Bb	Ab	G	A	D	Eb	Db	--[R_9]
O_{11}:	C#	D	G#	F#	G	C	Bb	A	B	E	F	Eb	-[R_{11}]
	RI_1	RI_2	RI_8	RI_6	RI_7	RI_{12}	RI_{10}	RI_9	RI_{11}	RI_4	RI_5	RI_3	

Each row in the table above, read from left to right, contains one of the transpositions of the original series and, read from right to left, its corresponding retrograde. Each column, read from top to bottom, contains one of the transpositions

of the inverted form of the set; read from bottom to top the complementary retrograde inversion is found.

Even the physical layout of the score is new for Stravinsky. He has adopted the method used by Stockhausen in his Zeitmasse,[3] where the instruments that play in any given brace of the score do not appear flush with the left-hand margin, and the appropriate rests included, but instead appear in any part of the page only for the duration of their actually played part. Thus the score is dotted like a mosaic by the various parts as they appear and disappear, sometimes contributing only a single note.. Needless to say, this complicates score-reading inordinately, especially since Stravinsky has adopted the irritating practice of omitting clef signs from the beginning of a brace, using instead a vertical rule down from the first clef sign to "unite" all instruments playing in that clef at that particular time. There was admittedly some justification for Stockhausen's use of this kind of score layout, for the woodwind parts in his Zeitmasse functioned quite independently of one another, having different meters, different tempi, and different interpretational instructions (especially regarding rubato). But this is hardly the case with Movements, where the instrumental parts do not have conflicting or overlapping meters, and where an ensemble style of playing, with precisely controlled attacks and releases, is still the order of the day. One wishes that Stravinsky would be content to be himself, instead of constantly

trying to demonstrate that he is au courant with the latest innovations of the avant-garde. One suspects the hand of Robert Craft in all this.

The basic set of Movements is announced in the first two bars by the solo piano, with violins, flute, and trumpet doubling the first two notes; and that is the only exposition of a complete twelve-note series to be found in the first three-quarters of the opening movement. Most of the following analysis, because of the reasons given previously, will have to be regarded as tentative, but perhaps it may serve as a prolegomenon. Alternate interpretations will be indicated where deemed significant.

First movement:

Piano: O_1 O_1 (6, 12, 1-4, 9-11) [O_8 (2-5, 1)] RI$_7$ (2,4,6) (7-10) O_1

Strings: O_{10} (8-12, 7) (7-9) I_3 RI$_7$ (1,3,5)

---

[7]

Piano: [I_{10} (6-5)] O_2 (2-5), I_4 (9-11), I_{12} (4-6), O_4 (1-3)

Stgs.: I_{10} (4)

Piano: I_9 (9-12), RI$_{11}$ (2-4), RI$_1$ (7-9), I_{12} (2-4), O_{10} (9-11) [O_{10} (9-11)]

[12] [13]

Fl.: O_4 (2-5) (9-11) I_6 R_{11} (2-5), O_{12} (4), I_{11} (7-9)

Cl.: I_2 {7-10} [+pf.] I_{12} (8-11)

B-cl.: O_{12} (4-6), I_8 (7-9), I_{12} (7)

Piano: I_2 (7-12) [+tpt.] R_5 (10-12) O_{12} (2-3)

---

[17]

Fl.: RI_1 (2-4), RI_3 (7-9), O_1 (4-5), I_2 (2-4), RI_9 (7-9)

Cl.: ----------O_1 (3) [I_{12} (10)] RI_{12} (1-2)

B-cl.: RI_{12} (3-4)

---

[18]

Fl.: I_4 (7-11)

B-cl.: I_5 (4-6), I_1 (10-12) [O_9 (7-9)]

Piano: O_{12} (2-6), I_2 (9-11), R_{11} (7-9) [C-G-Gb] [+stgs.]

---

[20]

Piano: R_{11} (1-3)
(5-7) R_5 [Eb-E-Gb]
I_4 (1-3) [Gb-F-Cb]
O_2 (4-8) [G-Ab-Db-Cb-Bb]
RI_5 (7-9) [Ab-Db-D]
I_5 (7-9) [Bb-Cb-A]
O_{12} (4-6) [G-Ab-Db]
R_6 (6-8) [F-G-D]

[+stgs.] [+stgs.]

1ma volta | 2da volta

Piano: I_{12} (7-12), O_1 (7-12, 6-1) [R_1 (7-12) :‖ RI_9 (7-10)
I_{12} (7-11)
O_4 (6-8)

---

[31]

Piano: R_3 (1-3)
RI_1 (8-12, 7-9, 6, 1-5)
RI_9 (7-9)
(8-11) I_1

Trbs.: RI_4 (1-6) [2 in pf.]

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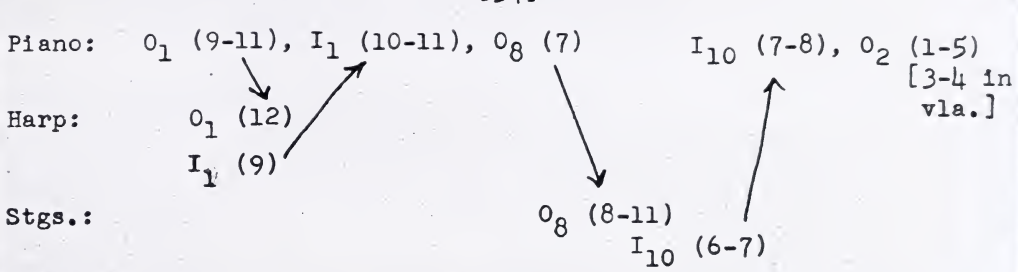
[34]


Piano: O_1 (9-11), I_1 (10-11), O_8 (7) I_{10} (7-8), O_2 (1-5) [3-4 in vla.]
Harp: O_1 (12) I_1 (9)
Stgs.: O_8 (8-11) I_{10} (6-7)

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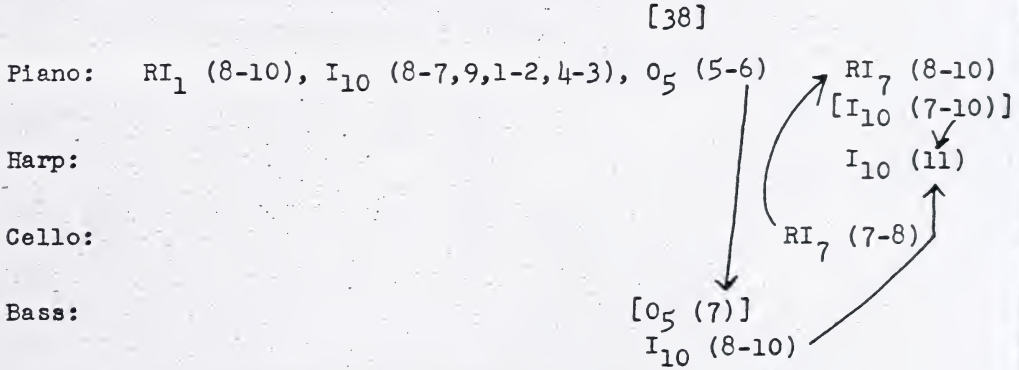
[38]


Piano: RI_1 (8-10), I_{10} (8-7,9,1-2,4-3), O_5 (5-6) RI_7 (8-10) [I_{10} (7-10)]
Harp: I_{10} (11)
Cello: RI_7 (7-8)
Bass: [O_5 (7)] I_{10} (8-10)

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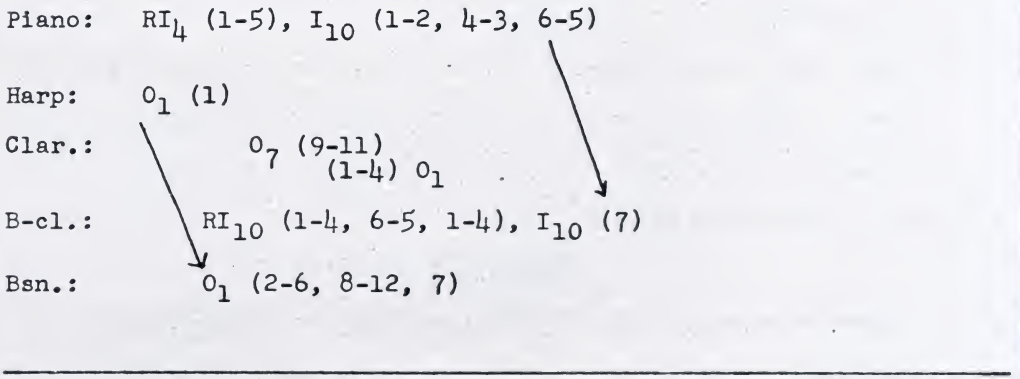
[39]


Piano: RI_4 (1-5), I_{10} (1-2, 4-3, 6-5)
Harp: O_1 (1)
Clar.: O_7 (9-11) (1-4) O_1
B-cl.: RI_{10} (1-4, 6-5, 1-4), I_{10} (7)
Bsn.: O_1 (2-6, 8-12, 7)

---

	[40]	[42]
Fl.	RI_5 (1-12) (1) R_1	
Vla.:	R_1 (2-6)	
B-cl.: Bsn.:	I_1	
Piano:		O_1 I_2 (1-5, 8, 10, 12, 11, 9, 7, 6) [O_1 (9-12)]

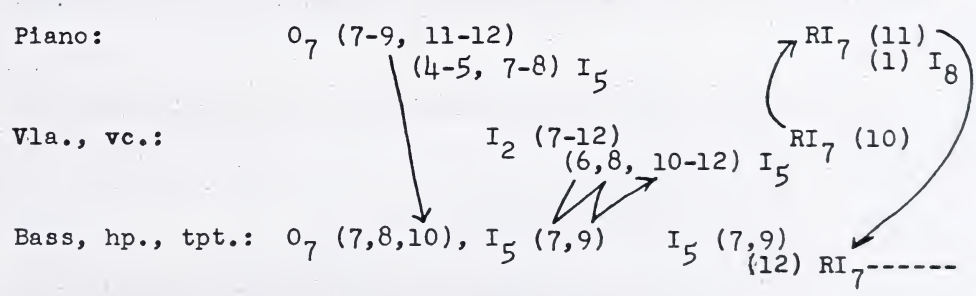
	[42b]		Interlude I:
			[43]
Piano:	R_1 (4-12),	I_1	Fls., cls.: RI_5 (2-7)
Hp., cel.:		R_1	Ob., fls.: R_{10} (1-6)

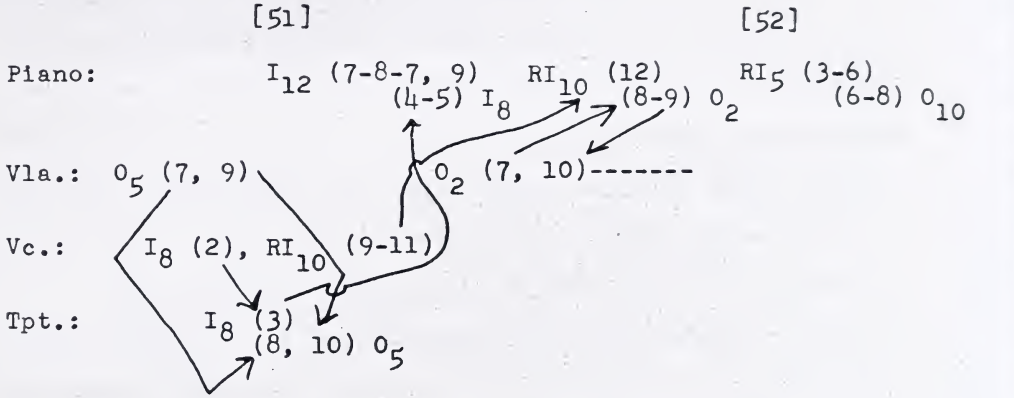
It should now be apparent that Stravinsky has indeed entered a new serial world with Movements. The complexity of the first movement was such that four pages of diagrams were needed to graph four pages of score. The three middle movements, fortunately, are not quite as complex as the movement analyzed above. The fifth and final movement, however, mirrors the complexity of the opening movement.

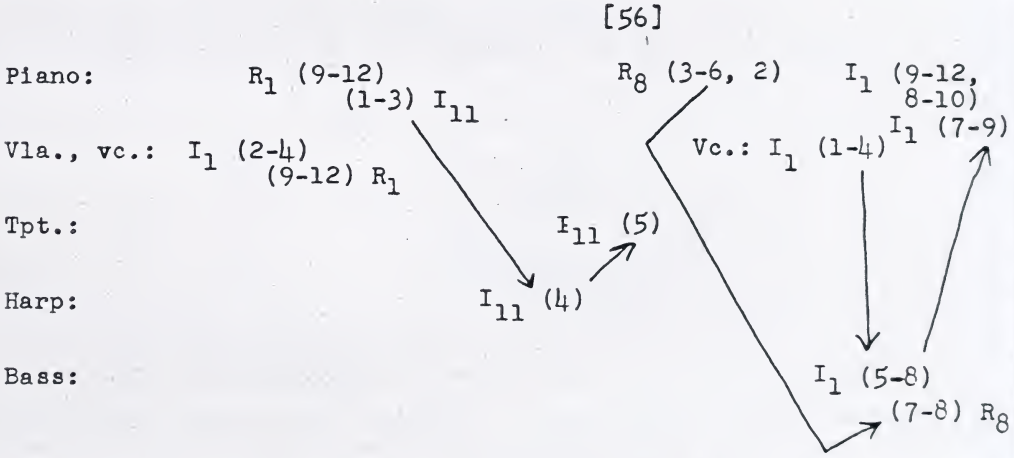
The second movement consists of only twenty-two bars, and requires only two pages of score. One writer sees it as

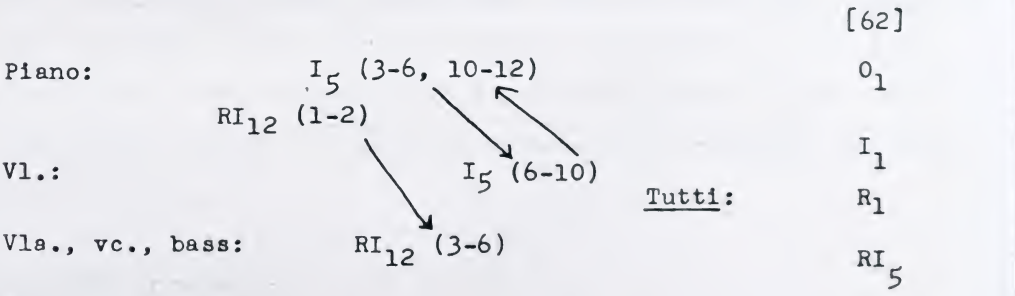
a "non-thematic" ternary form,[4] but if he is implying that it is a serial ternary form he is on even shakier ground. A case could be made for a "thematic" recapitulation bar-form, but about all that can be stated with certainty is that the first half of the movement consists of two parallel strophes of five bars each. The characteristic intervals at the beginning of each strophe are the augmented and diminished octave in the piano, and it is the reproduction of these intervals in bars [62]-[57] by the piano that suggests a recapitulation, though the accompanying texture at this point is different from that of the two opening strophes (bars [46]-[55]). Except for a simultaneous statement of all four forms of the basic series in the last six measures, the serial plan of the movement is relatively uncomplicated:

Second movement:



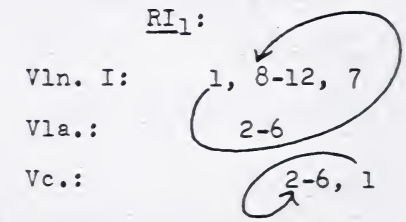

[51]
[52]
Piano:
I_{12} (7-8-7, 9)
RI_{10} (12)
RI_5 (3-6)
(4-5) I_8
(8-9) O_2
(6-8) O_{10}
Vla.: O_5 (7, 9)
O_2 (7, 10)-------
Vc.: I_8 (2), RI_{10} (9-11)
Tpt.: I_8 (3)
(8, 10) O_5


[56]
Piano:
R_1 (9-12)
(1-3) I_{11}
R_8 (3-6, 2)
I_1 (9-12, 8-10)
Vla., vc.: I_1 (2-4)
(9-12) R_1
Vc.: I_1 (1-4)
I_1 (7-9)
Tpt.:
I_{11} (5)
Harp:
I_{11} (4)
Bass:
I_1 (5-8)
(7-8) R_8


[62]
Piano:
I_5 (3-6, 10-12)
RI_{12} (1-2)
Vl.:
I_5 (6-10)
Vla., vc., bass:
RI_{12} (3-6)
Tutti:
O_1
I_1
R_1
RI_5

In the last six measures of the movement the orders are all fragmented among the various instruments with the exception of the basic set, which occurs entirely in the piano except for note #4 (found in the solo viola, measure [63]). Each of the four orders is complete and in proper time-sequence.

The interlude between the second and third movements (bars [68]-[73]) is for strings alone, and poses no serial problems. There are three serial statements, R_5 (3-6, 2), O_{12} (2-6, 1), and RI_1. The form of the latter is unusual because of the circular pattern it takes:



The third movement, like the two earlier movements, is full of overlapping fragments. The clarinet pedal tremolo near the end recalls a favorite Stravinskyan device (cf. the third Shakespeare Song, Pribaoutki, Berceuses du chat, et al.). This provides one of the rare harmonic references of the entire piece, and is remarked by Stravinsky himself in the passage quoted earlier. A serial outline of this movement follows:

Third movement:

[74]

Piano: R_5 (3-6, 1-2) RI_1 (1-5) O_{10} (10-12)
O_{12} (2-6, 1) RI_9 (5-8)

Ob., E.H.: RI_1 (6, 1), O_{10} (7-9)

Harp: RI_{12} (3-5)
[5 in tp.II]

---

[79]

Piano: RI_1 (2-5, 7) R_1 (9-12), I_1 (1-2, 4)

Ob.: RI_1 (7), R_6 (10), R_1 (7-8)

E.H.: R_6 (11-12)
(3) I_1-------

Tpts.: RI_1 (1, 6) O_5 (7-10)

---

[81]

Ob., E.H.: R_9 (10-12, 8-9), I_{11} (3-6), RI_9 (5-7)
[O_5 (11)]

Harp: O_5 (12) R_9 (7), RI_{12} (11, 9, 10)

B-cl.: R_2 (5-7)
[+tpts.]

[82]

Piano: R_{11} (7-10, 12-11)

Ob., cl.: O_2 (8-12, 7) I_9 (4-6), O_5 (7-10), O_1 (12)

Harp: O_1 (7-11)----------

---

[86]

Piano: RI_9 (1-6)

Ob., piano: RI_3 (1-4, 6-5)

[89]

Fl.I: I_6 (8-12, 7), R_{11} (7-9)

O_{12} (2-6, 1)

Fl.II: I_3 (5-6) (1-3) RI_6

Ob., clar.: I_3 (3-4)

---

[90]

Fl. I: O_7 (7-9), I_2 (7-10)
[R_3 (11-12)]

Fl. II: R_3 (10) R_1 (8-12)

Piano: R_6 (7-9) (7-9) I_4
(1-4) RI_1, R_1 (7), RI_5 (2-5)

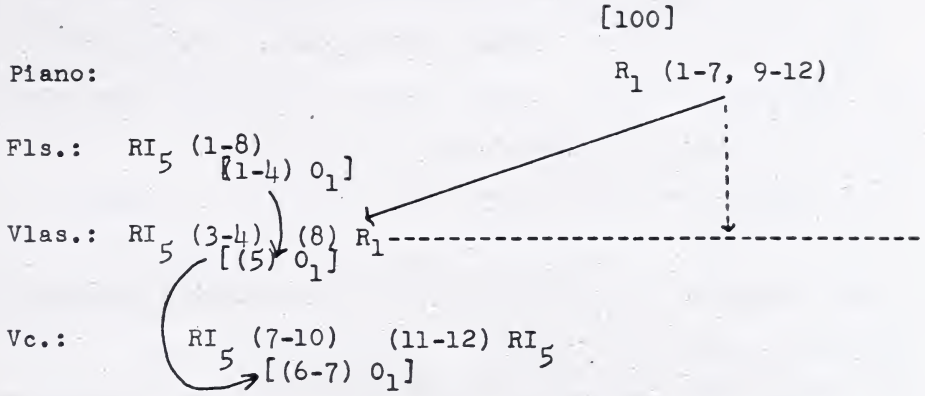
Cl., hp.: I_2 (5-7)

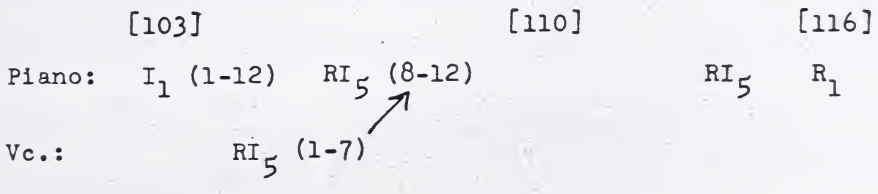
The interlude that follows this movement is scored for brass and bassoon, and consists entirely of one complete statement of RI_9.

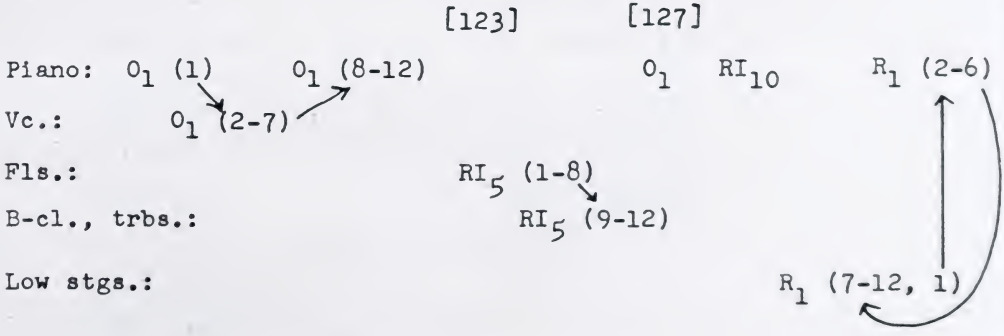
The fourth movement is unusual in a number of respects. It is the only movement consisting almost entirely of complete serial statements of the various orders, with practically no fragmentation. Also, it is the only movement whose form is clear-cut and unmistakable (strophic, with three nearly equal strophes of fourteen, thirteen, and thirteen bars respectively; because of the change in texture in the central strophe resulting from the addition of trombones the form could also be considered ternary strophic, i.e. A-B-A). And finally, it is the only movement solidly grounded in functional harmony. This harmonic basis is provided by string chords in harmonics that run throughout the three strophes. The first chord consists of an E-A fourth to which is added a C#-G# fifth, forming an A major seventh sonority. The second chord, formed similarly in the second strophe, is a D major seventh. The final strophe, as might be anticipated, recapitulates the opening sonortiy. The harmonic progression, therefore, is very clearly tonic-subdominant-tonic.

The serial structure of the movement, however, is as complex and intricate as its immediate predecessors, though not quite as complex as the first and fifth movements. The complete serial plan is given below:

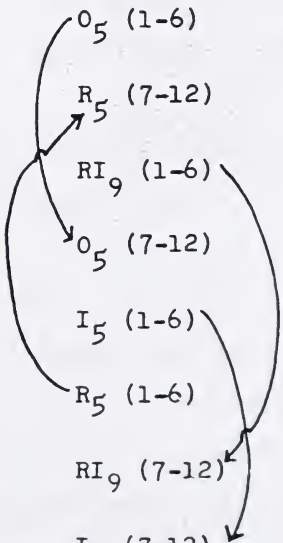
Fourth movement:







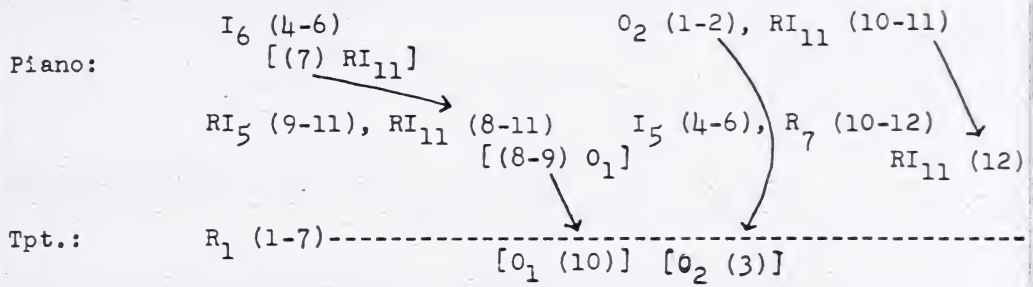
The next interlude is the most elaborate of the four. Its five bars require every instrument in Stravinsky's orchestra except the harp and celeste. It is, in fact, the only real tutti of the entire piece. Both in appearance and in structure it harks back unmistakably to some of the pages in Threni.[5] It provides, thus, one of the few recognizable points de repere of the old Stravinsky to be found in the Movements. (The sustained string fifths in harmonics and the clarinet perfect-fourth tremolo of a few pages back are others.) The serial plan of this interlude (the fourth) is given below:



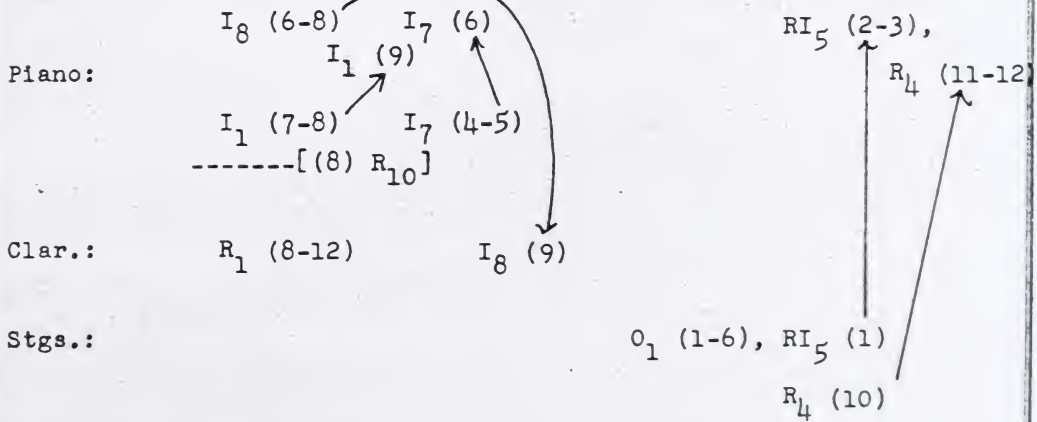
Note that all eight hexachords of the four serial forms occur simultaneously, transposed either up or down a major third. The strings alone are exempt from symmetric treatment.

The fifth and final movement of the piece has been described by one writer as "the most complex in the work, and formally the least amenable to definition, description, or analysis."[6] The movement is indeed complex, but fortunately no more so than the two middle pages of the first movement. Fragmentation is again the rule, with seldom more than three consecutive notes from the same serial order occurring. Stravinsky's comments on this movement (quoted earlier) only add to the confusion. He says, for example, that "no theorist could determine the derivation of the three Fs announcing the last movement simply by knowing the original order, no matter how unique the combinatorial properties of this particular series."[7] The three F's, played by the piano and trumpet, are simply the first note of the retrograde, which is stated linearly in complete form by the trumpet and clarinet in the first four measures. The rest of the serial structure is not nearly so easy to trace, though. The hexachords Stravinsky spoke of in conjunction with this movement are more often than not subdivided into their component "triangles," to borrow Stravinsky's term, and, as we have already seen, almost any "triangle" can belong to any of several orders. The following analysis will therefore have to be regarded as tentative in some respects, though every effort has been made to match up the respective triangles and hexachords.

Fifth movement:



[145]



[149]

Piano: RI_5 (4-5), I_{11} (1-4), RI_{12} (2-5) (6) I_5

Fl. I: I_5 (7-8), I_{11} (6) [O_6 (8)]

Fl. II: I_{11} (5), I_5 (8)

Harp: I_8 (6-8), O_6 (7), I_{11} (4), O_6 (9)

---

[150]

Vln. I: RI_6 (10), I_{11} (4) O_{10} (7)

Vln. II: RI_6 (11), I_{11} (6), I_1 (10)

Vla.: O_{10} (6, 8) I_1 (7)

Harp: RI_6 (12) (7-9) I_1 I_{11} (5)

[151]

Piano: I_1 (9, 1-3) RI_1 (2-12)

Clar.:

Brass: I_1 (4-12) (1) RI_1 R_1 (9) R_1 (10-12, 7-8)

---

[155]

Piano: I_{10} (1-2) RI_1 (2-4), O_{11} (2-4), O_3 (1-3) [O_7 (7)]

Cls.: I_{10} (5-6), RI_1 (12, 7-8)

Cl. + trb.: O_1 (8-12, 7)

Hp.: I_{10} (3-4), RI_1 (7-11) [+cel.]

[162]

Piano: R_{12} (9-11), RI_{12} (2-6) RI_3 (1-5) RI_4 (8-12, 7)
(1-4) R_{12} R_8 (10-12)

Fl.: R_1----------

B-cl., trb.: O_1 (2-6, 1)

---

[163]

Piano: I_6 (9-12) RI_{10} (4-5) O_1 (5-4) R_{11} (1-6)
(1) RI_{10} (9-12) R_7

Clar.: RI_{10} (2-3) O_1 (6, 1-3), I_1 (7-12)

---

[164]

Piano: O_{11} (2-1, 3-6), I_1 (12) R_1 (10-12, 7-9), O_7 (4-9)
(1-6) RI_1 RI_8 (8-9-

B-cl.: I_1 (7-11) Bass: RI_8 (4-5) 7-10-6)

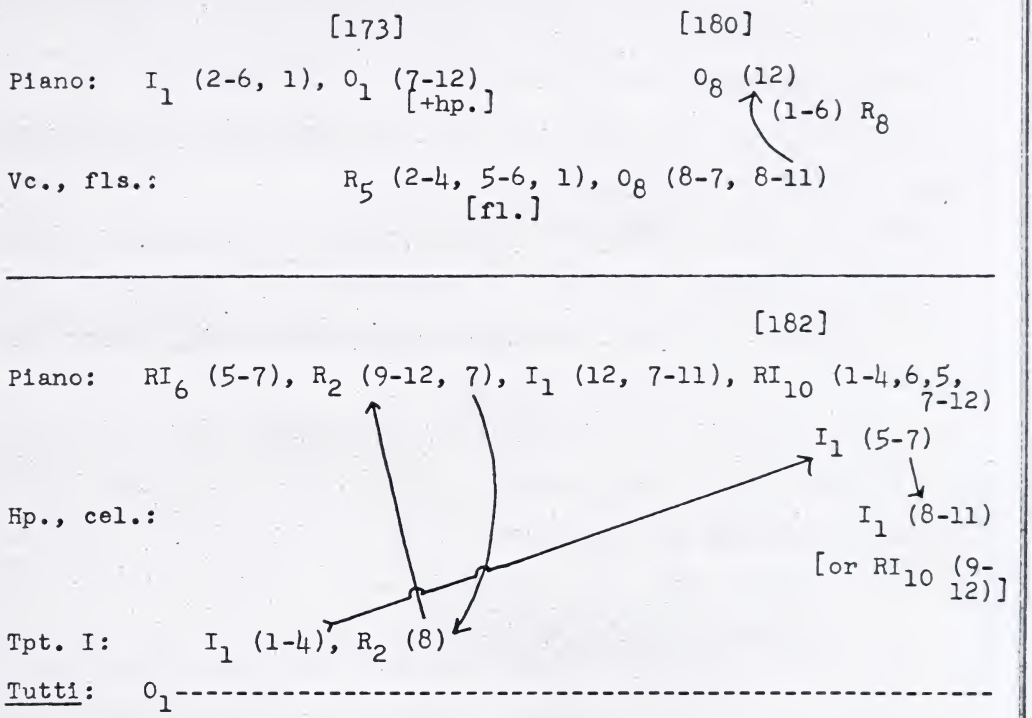
---

[169] [171]

Piano: R_4 (4-5)
(1-2) R_{10}

Fl., cls.: O_6 (5-7), I_5 (4-6) R_{10} (3, 9-11)

Cellos: RI_9 (9-11) RI_{12} (3-5)
I_5 (6-8)
R_7 (10-12)
I_4 (4-6) R_4 (3)


[173]
[180]
Piano: I_1 (2-6, 1), O_1 (7-12) [+hp.]
O_8 (12)
(1-6) R_8
Vc., fls.: R_5 (2-4, 5-6, 1), O_8 (8-7, 8-11) [fl.]
[182]
Piano: RI_6 (5-7), R_2 (9-12, 7), I_1 (12, 7-11), RI_{10} (1-4,6,5, 7-12)
I_1 (5-7)
Hp., cel.:
I_1 (8-11)
[or RI_{10} (9-12)]
Tpt. I: I_1 (1-4), R_2 (8)
Tutti: O_1
[184]
Harp: R_8 (2-4)
(3) R_{12}
[(9) R_{10}]
Cel.: RI_5 (9-11)
(5-7, 4-3) R_{11}
RI_9 (3-4)
Stgs.: R_{10} (7-8)
(1-2) R_{12}
I_{10} (7-9), RI_9 (2)
[187]
[193]
Tutti: O_1
O_1 (6)
(12)

Thus ends the most complex of all Stravinsky's compositions. Whether or not this will become a modus vivendi for him remains to be seen. At this writing, only two pieces have been published since Movements--the Epitaphium and Double Canon--both one-page minor chamber works. One awaits with curiosity the publication and performance of two newly announced works--A Sermon, A Narrative, and a Prayer for chorus, orchestra, soloists, and narrator; and Noah and the Flood, a not yet completed work for television involving dancers, singers, and stage spectacle. Both works are concerned with the subject of Noah, according to a recent article in the New York Times,[8] and the latter piece is scheduled to enter the repertory of the New York City Ballet after its television premiere.

Epitaphium
für das Grabmal des Prinzen Max Egon zu Fürstenberg

This one-page composition was written in memory of the patron of the Donaueschingen Festival, and was premiered at Donaueschingen October 17, 1959. It is scored for harp, flute, and clarinet, and lasts about a minute in performance. Critical opinion of this piece (and of its twin, the Double Canon) is sharply divided, as might be expected. One writer claims that "it [the Epitaphium] belongs to the line of magically self-contained miniature vocal and instrumental masterpieces that Stravinsky started writing in the

second decade of the century, and took up again, after a lapse of thirty years, under the influence of Webern's music."[9] Another critic insists that these pieces are "inconsequential demonstrations . . . more appropriate as entries in a composer's sketch-book," and that they represent, along with the Movements, "Gothic mysticism or its contemporary equivalent."[10]

The writer quoted above is entitled to his opinion that the Epitaphium is a masterpiece, but he is in demonstrable error when he claims that this piece is Stravinsky's

> First work in which harmony is serially ordered throughout. In earlier works he has with rare exceptions used the series only melodically. Chordal presentation of the series has been almost entirely confined to short introductory, cadential or ritornello-like passages.[11]

Actually there is nothing in the Epitaphium that isn't found in the Movements or even earlier pieces. The harp part, it is true, is harmonic, but the flute and clarinet strophes which alternate with the harp are clearly linear and "harmonically" independent of each other, though they are serially complementary.

Serially, the construction of the piece is simplicity itself. Only prime forms of the series are used, and each is fully stated in natural order (with two minor exceptions). Again it is clear that Stravinsky's method of obtaining the retrograde inversion is not by retrograding the inversion but by inverting the retrograde; therefore, as in Threni, this form shall be referred to as the "inverted retrograde"

rather than the "retrograde inversion."

The harp states the basic series harmonically in the first measure, echoed by the flute and clarinet in the next, though in linear, rather than purely harmonic, fashion. The harp then states the inversion, followed by the inverted retrograde in the two wind instruments. The retrograde is stated by the harp in the fifth strophe, the retrograde and the inversion by the winds in the sixth, and the inverted retrograde by the harp in the final strophe.

The antiphonal independence of the two "choirs" (i.e. harp on the one hand, flute and clarinet on the other) is maintained serially. Note that each of the four harp strophes presents a different serial order (O-I-R-IR), and that these four prime orders are also presented in the woodwinds without repetitions (O-IR-R-I). One serial displacement occurs in the sixth strophe where the fifth note of the retrograde precedes the fourth, and another in the fifth strophe when the third note of the retrograde precedes the first two as a grace note.

In performance the Epitaphium, like much of Webern's music, is puzzling in its brevity. The instruments produce lovely sounds, however, and that is no doubt why they were chosen.

Double Canon
(Raoul Dufy in Memoriam)

The Double Canon is scored for string quartet, and it is a surprisingly gray, monochromatic piece--quite unlike anything Dufy ever painted, in fact. It recalls the Dirge-Canons of the In Memoriam Dylan Thomas, though it is much less appealing than the earlier piece. The first five notes of the twelve-note series used in the Double Canon bear a marked resemblance to the five-note series used in the Dylan Thomas Memoriam.

The basic series of the Double Canon is announced by the first violin at the very beginning, and is exposed linearly in five measures. This, the canonic subject, is answered by the second violin at the interval of a major second beginning in the second bar. The contrasting subject is simply the retrograde, announced by the viola in approximately the fifth bar of the piece (each part is barred separately). The "true" retrograde inversion again takes the form of the inverted retrograde, which occurs three times in prime form. The complete serial plan of the one-page composition follows:

Vln. I:	O_1		O_1		IR_1		IR_1
Vln.II:		O_{11}		O_1		IR_3	IR_1
Vla.:		R_1		R_1			
Vc.:			R_3		R_1		

Of interest is the fact that the violins are confined to the original series and the inverted retrograde, while the viola and cello play only the retrograde. The inverted form of the series is not employed.

Canonically, the theme is stated four times by the violins (at the major second and unison, then the inverted retrograde at the interval of the major second and unison), and twice by the viola and cello (at the minor seventh and octave --or the major second and unison, allowing octave subtraction) in the retrograde form.

Like the Epitaphium, the Double Canon is a footnote to Stravinsky's oeuvre. The pieces are so short that one could hardly expect major technical or formal innovations. One must wait for the publication of Stravinsky's newest pieces to discover if the direction begun in the Movements is to continue, or if, instead, the Movements proved a cul de sac and will represent another turning point for Stravinsky.

FOOTNOTES TO CHAPTER V

1. According to the published score the duration is only ten minutes, not twelve.

2. Igor Stravinsky and Robert Craft, Memories and Commentaries (Garden City, N.Y.: Doubleday & Co., 1960), pp. 100-101.

3. Karlheinz Stockhausen, Nr. 5 Zeitmasse for five woodwinds (Vienna: Universal Edition, 1957).

4. Richard Franko Goldman, "Current Chronicle," Musical Quarterly, XLVI, No. 2 (April, 1960), pp. 260-264.

5. Cf. (in Threni) pp. 60-63, 69-70; also the choral cadences in bars [309] and [321].

6. Goldman, op. cit.

7. Supra, p. 123.

8. Ross Parmenter, "World of Music: Two Noahs," The New York Times, Sunday, April 2, 1961, p. X-11.

9. Colin Mason, "Stravinsky's Newest Works," Tempo, No. 53/54 (Spring-Summer, 1960), pp. 2-10.

10. Goldman, op. cit.

11. Mason, op. cit.

CHAPTER VI

CONCLUSIONS

Stravinsky's evolution as a serial composer has been thoroughly logical and consistent. The phases of this development are indicated in the chapter headings of this study. Beginning with purely melodic phrases, then true serial units of varying lengths, Stravinsky gradually worked his way phylogenetically toward total, twelve-note serialism, duplicating in surprising detail almost the same steps that Schoenberg followed in evolving the original "system of composing with twelve tones." A capsule history of this evolution can be observed, as a matter of fact, in the latter's Five Piano Pieces, Op. 23,[1] where the first movement is constructed from a three-note series, the second from a nine-note series, the third from a five-note series, and the last from, finally, a true twelve-note series--the first movement to be so composed.[2] From a study of the music it is not implausible to imagine that had not Schoenberg evolved the system of twelve-tone, or serial, composition, Stravinsky might very well have done so. It is clear, at any rate, that Stravinsky's "adoption" of the system was not an overnight affair (contrary to what many superficial writers have assumed), but rather

a slow, reasoned process growing out of an inner compositional need. For, as Robert Evett has put it in a perceptive essay, "any real progress in music is a private matter, something that evolves in a lively musical mind and constitutes a development of the resources of that mind." Therefore, "a responsible composer will find or assimilate into his technique only those elements which he needs for his work. . . ."[3]

Stravinsky mastered each detail of serial composition step by step. The Septet marked his first attempt to derive a complete three-movement composition from the same basic source material. The Three Shakespeare Songs each experiment with different sized serial units and with different possibilities of serial construction, while at the same time being all subtly interrelated. Free material is introduced mostly for harmonic reasons, for Stravinsky could not yet manipulate his serial resources to obtain the desired degree of control over tonality. This problem was solved in the Dylan Thomas Memoriam in which every note, for the first time, was serially derived. This piece was the first serial milestone for Stravinsky, for, working with a short serial cell of five notes, he proved that he had completely assimilated and mastered the basic techniques of serial composition.

From this point on his attention was turned to the problems of total dodecaphonic serialism, and these were solved in the same gradual way that he mastered the problems of total non-dodecaphonic serialism. Agon required three separate

dodecaphonic series, two independent hexachords, and much free material, paralleling in its variety the Three Shakespeare Songs. The Canticum Sacrum, which was begun after Agon but completed before it, utilized two different twelve-note series in its three central movements and no series at all in its outer movements, which were, none the less, symmetrically related. The entire Canticum was symmetrically organized, in fact. This piece marked the first attempts by Stravinsky to use any kind of series vertically for the generation of specific harmonies, though these attempts were sporadic and inconclusive. Threni is the second serial milestone, for it is the direct culmination of Stravinsky's dodecaphonic drive, standing in exactly the same relationship to Agon and the Canticum Sacrum as the In Memoriam Dylan Thomas stands vis-à-vis the Three Shakespeare Songs and the Septet. For the entire music of Threni comes from one single twelve-note row, which generates vertical sonorities as readily as linear counterpoint.

After the achievement of Threni one might have expected Stravinsky to consolidate his technique by writing other works in the same idiom, but Stravinsky, of course, has never been known to tread water. The serial direction he has taken in the Movements for Piano and Orchestra (titled originally "Concerto for Pianoforte and Groups of Instruments"[4]) is a curious one. We are not surprised that he is becoming "not less but more of a serial composer"; but the logical development at this point might have been toward the serialization

of other aspects of the music, i.e. rhythm, timbre, dynamics--towards, in other words, so-called "total" organization or serialization of all the musical elements. But instead, having arrived ultimately at twelve-note serialization, he seems intent now upon destroying the hegemony of the twelve-note set, preferring instead to break it down into its component hexachords which, in turn, are further reduced to their respective triangles and dyads, or combinations thereof--all of which appear to function autonomously. It will be extremely interesting to see what he does in the next few pieces.

The most interesting thing about Stravinsky's serial music is that, with the possible exception of Movements, it all bears the unmistakable Stravinskyan stamp, and sounds not at all like any of the music of the Viennese Three. This fact, more than any other, has attracted a great deal of attention to the serial movement in general--not only on the part of the musically aware public, but from many composers themselves who had previously had a limited conception of the possibilities of serial composition.

In the course of this study it has become clear that there are two principal reasons why Stravinsky's serial music still sounds like Stravinsky. The first is the orchestration, or "instrumentation" (to use Stravinsky's preferred term) of the music which, though changing in concept (the full orchestral tutti has vanished, the orchestra instead becoming a source of plastic chamber ensembles) has not at all changed in Klang-ideal, helping preserve the distinctive, crisp, traditional

Stravinsky sound. The second reason lies in the handling of the series themselves, for, until Movements, tonal organization of the material was a prime concern. These techniques have been discussed throughout the course of the paper, and may be summarized as (1) avoidance of the tritone in construction of the basic series and of tritone sonorities in the compositional use of the series, with emphasis instead upon the perfect and consonant intervals; and (2) the extraction of tonal roots from the material by the use of pedal-points, suspensions, ostinati, and octave doublings. It is this latter--a new method of tonal polarization of the twelve-tone system--that is possibly Stravinsky's most significant contribution to serial technique.

Other factors of course contribute to the identifiable Stravinskyan sound of his new music. His rhythmic characteristics and his special way of setting a Latin text remain basically the same. The search for fresh colors and sonorities continues. It is only in the Movements that one is at a loss to recognize much of the old Stravinsky. We, no less than he, are "amazed" at the "tendency toward antitonality."

Whatever Stravinsky may do next, we can be sure that he will never be content to stand still. At an age when most men have long since rested on their laurels, his is still the relentless, questing spirit, tirelessly seeking--and usually finding--the solution to self-created compositional problems. It is understandable, therefore, with what eagerness the publication of his recent work is awaited.

FOOTNOTES TO CHAPTER VI

1. Arnold Schönberg, Five Piano Pieces, Op. 23 (Copenhagen: Wilhelm Hansen Edition, 1923).

2. Contrary to Apel's statement in the Harvard Dictionary of Music (Cambridge: Harvard University Press, 1955) that Schönberg's Serenade, Op. 24 contains the "first definite expression" of the twelve-tone system ("Twelve-tone Technique," p. 776).

3. Robert Evett, "Progress in Music," The Arts at Mid-Century, ed. Robert Richman (New York: Horizon Press, 1954) p. 63.

4. Vlad, op. cit., p. 222.

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VITA

David Ward-Steinman was born November 6, 1936, in Alexandria, Louisiana, and attended elementary and secondary schools in that city. He received the degree of Bachelor of Music cum laude from Florida State University (Tallahassee, Florida) in 1957, and the degree Master of Music from the University of Illinois in 1958. He has been pursuing the degree of Doctor of Musical Arts at the latter institution since the fall of 1959.

In the fall of 1957 he held a quarter-time appointment as Graduate Assistant at the University of Illinois, and a two-thirds time appointment in the spring of 1958. The next year, 1958-59, was spent in Paris in private study with Nadia Boulanger, as recipient of the Kate Neal Kinley Memorial Fellowship of the University of Illinois. In 1959-60 he received the George A. Miller Fellowship in Music, and in 1960-61 a University Fellowship. He has also studied composition with Milton Babitt at the Berkshire Music Center, Tanglewood, and with Darius Milhaud at the Aspen Music School, Colorado (both under scholarships), and with Wallingford Riegger at Stockbridge, Massachusetts, under the Charles Ives Scholarship.

In 1961, his two Psalms of Rejoicing for mixed chorus

a cappella were published by Mercury Music Corporation, New York. His Concerto Grosso for Combo and Chamber Orchestra (commissioned by John Garvey for the School of Jazz, Lenox, Massachusetts) is currently being prepared for publication by MJQ Music, New York.

His compositions have won four prizes in the BMI-sponsored international Student Composers Awards (1954, 1955, 1960, 1961). In 1961 he was awarded the Joseph H. Bearns Prize of Columbia University for his Symphony (1959). In 1960, his Psalms of Rejoicing won First Prize in the choral division of the National Federation of Music Clubs' composition contest, and his Quintet for Brass received First Prize in the instrumental category. In 1958 his Three Songs for Clarinet and Piano were awarded First Prize in the Phi Mu Alpha Sinfonia National Composition Contest, Alumni Division. In 1957 he tied for First Prize, the Raphael Sagalyn Award, for the best orchestral composition by a student at Tanglewood, Berkshire Music Center. That same year he was a guest composer at the American Symphony Orchestra League's West Coast Workshop (Asilomar, Monterey, California). In 1956 he was commissioned by the C.A.P. Symphony of Milwaukee, James Bauman, conductor, to write a piece (Two Episodes) for youth orchestra. In 1955 he received the Sandspur Prize of Florida State University for the best student musical comedy score.

In the fall of 1961 he will join the faculty of San Diego State College, California, as an Assistant Professor of Music.

CONCERTO FOR CHAMBER ORCHESTRA
(1960-1961)

BY

DAVID WARD-STEINMAN

B.Mus., Florida State University, 1957
M.Mus., University of Illinois, 1958

COMPOSITION

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF DOCTOR OF MUSICAL ARTS IN COMPOSITION
IN THE GRADUATE COLLEGE OF THE
UNIVERSITY OF ILLINOIS, 1961

URBANA, ILLINOIS

UNIVERSITY OF ILLINOIS

THE GRADUATE COLLEGE

MAY, 1961

I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY SUPERVISION BY DAVID WARD-STEINMAN

ENTITLED CONCERTO FOR CHAMBER ORCHESTRA

BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF MUSICAL ARTS

Paul Gerhardt Kuntz by Herbert Kinsley
In Charge of Thesis

Duane Branigan
Head of Department

Recommendation concurred in†

George Hunter
Robert Kelly
H. D. Griffiths
Paul Gerhardt Kuntz

Committee on Final Examination†

† Required for doctor's degree but not for master's.

D517

To my parents

CONCERTO

for

CHAMBER ORCHESTRA

David Ward-Steinman
(1960-1961)

I

Maestoso ♩=36 [♩=72]

NÉOCOPIE MUSICALE, 9 rue Poyatier, Paris 18e

A (d=44)
Flute
Oboe
Clarinet in Bb
Bsn.
sff
p
Moving forward
A
Horn in F
Trumpet in Bb
Trombone
sfp
Sub. p
Cymb.
Timp.
[Change to F and C]
Perc.
Triangle
Moving forward
I Vlns.
II
Vlns.
Vlas.
Cellos
Basses
pizz
arco
Sub. p

stringendo poco a poco
Fl.
Ob
Cl. in Bb
Bsn
f
mf
pif marc.
f marc.
stringendo poco a poco
Hn. in F
Tpt. in Bb
Tromb.
Solo
cresc molto
Timp. sticks on Sus.Cym.
Perc.
stringendo poco a poco
I
Vlns.
II
Vlas.
Cellos
Basso
mp
pizz.

Slower
(♩=♩)
stringendo
sub. Maestoso
Flute
Oboe
Slower
stringendo
sub. Maestoso
sub. Maestoso
Cym.
Wooden sticks
Tamb.
Slower
(♩=♩)
stringendo
sub. Maestoso

Fl.
Ob.
Cl. in Bb
Bsn.
Horn in F
Tpt. in Bb
Tromb
Timpani
I
Vlns.
II
Vlas
Cellos
Basses
Solo
Straight mute
Open
hard felt sticks
soft sticks
[F to G]
arco
sim.

Fast, energetic (♩ = ca.144)
Ritardando
Fl.
Ob
Cl. in Bb
Bsn.
Ritardando
Fast, energetic
Horn in F
Tpt. in Bb
Tromb.
Fast, energetic
Wood sticks
Timp.
[C to Bb]
[G to F]
martellato
Ritardando
I Vlns. II
Vlas
Cellos
Basses
pizz.
arco

Fl
Ob.
Cl. in Bb
Bsn.
Hn. in F
Tpt. in Bb
Tromb.
Timp.
Hard felt sticks
I
Vlns.
II
Vlas.
Cellos
Basses
arco
Solo

Fl.
Ob.
Cl. in Bb
Bsn.
Hn. in F
Tpt. in Bb
Tromb.
Timp
I
Vlns
II
Vlas
Cellos
Basses

Fl.
Ob.
Cl. in Bb
Bsn.
Hn. in F
Straight mute
Tpt. in Bb
Tromb.
Timp.
tu
Xylophone
I
Vlns.
II
Vlas
Cellos
Basses

C
Fl.
Ob.
Cl. in Bb
Bsn.
C
Solo
St. mute
C
I
II
arco
dim.
pizz.
(pizz.)
arco
mp

Fl.
Ob.
Cl. in Bb
Bsn.
cresc. poco a poco
Hn. in F
Tpt. in Bb
Tromb.
[open]
[open]
Sns. Cym.
Soft sticks
tr
I
Vlns.
II
Vlas.
Cellos
Basses
cresc.

NEOCOPIE MUSICALE, 9 rue Foyatier, Paris 18e

D
8va
Fl.
Ob.
Cl. in Bb
Bsn.
mf
D
n. in F
t. in Bb
romb.
fp
sff
open
D
Glock.
sf
I
Vlns.
II
Vlas
Vcellos
Basses
mf

8
Fl.
Ob
Cor.
Bsn.
cresc.
mp
cresc.
8va
(p)
5
4

Fl.
Ob.
Cl in Bb
Bsn.
mf
cresc. poco a poco
f
ff
cresc. poco a poco
Hn. in F
Tpt in Bb
Tromb.
p
cresc. poco a poco
Timp.
Hard felt sticks
fp
cresc. molto
I
Vlns.
II
Vlas
Cellos
Basses
pizz
più f
cresc. molto

E
Fl.
Cb.
Cln. Bb
Bsn.
Solo
sff
pp
ff
mp
p
muted
[open]
Hn. in F
Tpt. in Bb
Tromb.
Timp.
E
I
Vlns.
II
Vlas
Cellos
Basses
mf

Solo
Ob.
Cl. in Bb
Bsn.
Hn. in F
Solo
open
Side Drum
S.D.
Rim shots
Vlns.
Cellos
Basses
(♪3♪)
F
Solo
Ob.
Cl. in Bb
Bsn.
Hns. in F
F
Cellos
Basses

Fl
Cb
Bb
sn.
sf
p sub.
F
Bb
Solo
mf
p sub.
sf
arco
p lontano

G
Fl.
Ob.
in Bb
Bsn.
mp cresc.
mf cresc.
ff
G
in F
in Bb
mb.
Ten.
G
Perc.
Sus. cymb.
l.v.
(same sticks)
Timp.
p cresc.
ff
Vlns
I
Vlas
llos
asses
cresc.
ff

Fl.
Ob
Cl. in B♭
B.Sx.
Trp. in F
Trmbs
Tomb
Tp.
[B♭ to B♮]
[F to F♯]
I
Vns.
I
Vas
Vlcs
Cbses
arco
arco

*NB. If 3rd timpani is not available, play this note an 8ve lower

Fl.
Ob.
Cl.
Bn.
Tr.
Hn.
Trb.
Tba.
Timp.
Perc.
Vln. I
Vln. II
Vla.
Vc.
Cb.
Sl. mvte
Xylophone
sim.
sim.
pizz.
pizz.
pizz.
pizz.

Fl.
Co.
Clin Bb
Bsn.
dim.
mf
pp
dim.
pp
Horn in F
Tpt. in Bb
Tromb.
muted
mf
p
St. mute
sff
mf
p
Glockenspiel
ff
I
Vlns.
II
arco
sfz
arco
sfz
arco
sfz
pizz.
pp
Cellos
arco
sfz
pizz.
pp
Basses
(pizz.)
sfz

Fl.
Cl. in Bb
Bsn.
Perc.
Vlns
Vcellos
Basses
Solo
pp
pp
pp
stagger bowing
ppp
arco
ppp
stagger bowing
arco
ppp
stagger bowing
pp

Fl.
Cl. in Bb
Bsn.
Hn. in F
Tpt. in Bb
Glock.
I
Vlns.
II
Vlas
Cel'os
Bass
solo
(St. mute)
pp
p
ff

Open
Solo
cresc. poco a poco
cresc. poco a poco
cresc. poco a poco
(trins. out)
pizz.

Fl.
Eb.
Cl. in Bb
Bsn.
Hn. in F
Tpt. in Bb
Tromb.
Xylo.
Vlns.
Vla.
Cellos
Basses
K
Open
cresc. poco a poco
cresc. poco a poco
cresc. poco a poco
cresc. poco a poco
pizz.
pizz.
pizz.
arco
mp

Fl
Ob
Cl in Bb
Bsn
Hn in F
Trbs
Timb
pizz.
arco
Vl I
Vl II
Vla
Vcs
Cbs

Fl.
Ob
Cl. in Bb
Bsn.
Horn in F
Tpt. in Bb
Trom b.
I
Vlns.
II
Vlas
Cellos
Basses
mf
f
ff

L
8va
Fl.
Ob
in Bb
Bsn
mf cresc. poco
< a poco
cresc. molto
L
cresc. poco a poco
cresc. molto
in F
in Bb
cresc. poco a poco
cresc. molto
L
fp
cresc. molto
8va
I
Vlns.
II
Vlas
Vcllos
Bases
pizz
pizz
pizz
pizz
pizz

Fl.
Ob
Cl. in Bb
Bsn.
Hn. in F
Tpt. in Bb
Tromb.
Timp.
I
Vlns.
II
Vlas
Cellos
Basses
Solo
Solo
molto dim.
molto dim.
molto dim.
molto dim.
molto dim

Fl.
Cl.
in B♭
Bsn.
Triangle
Triangle
p
attacca
I
Vlns.
II
Vlas
Cellos
Basses
[4:45]

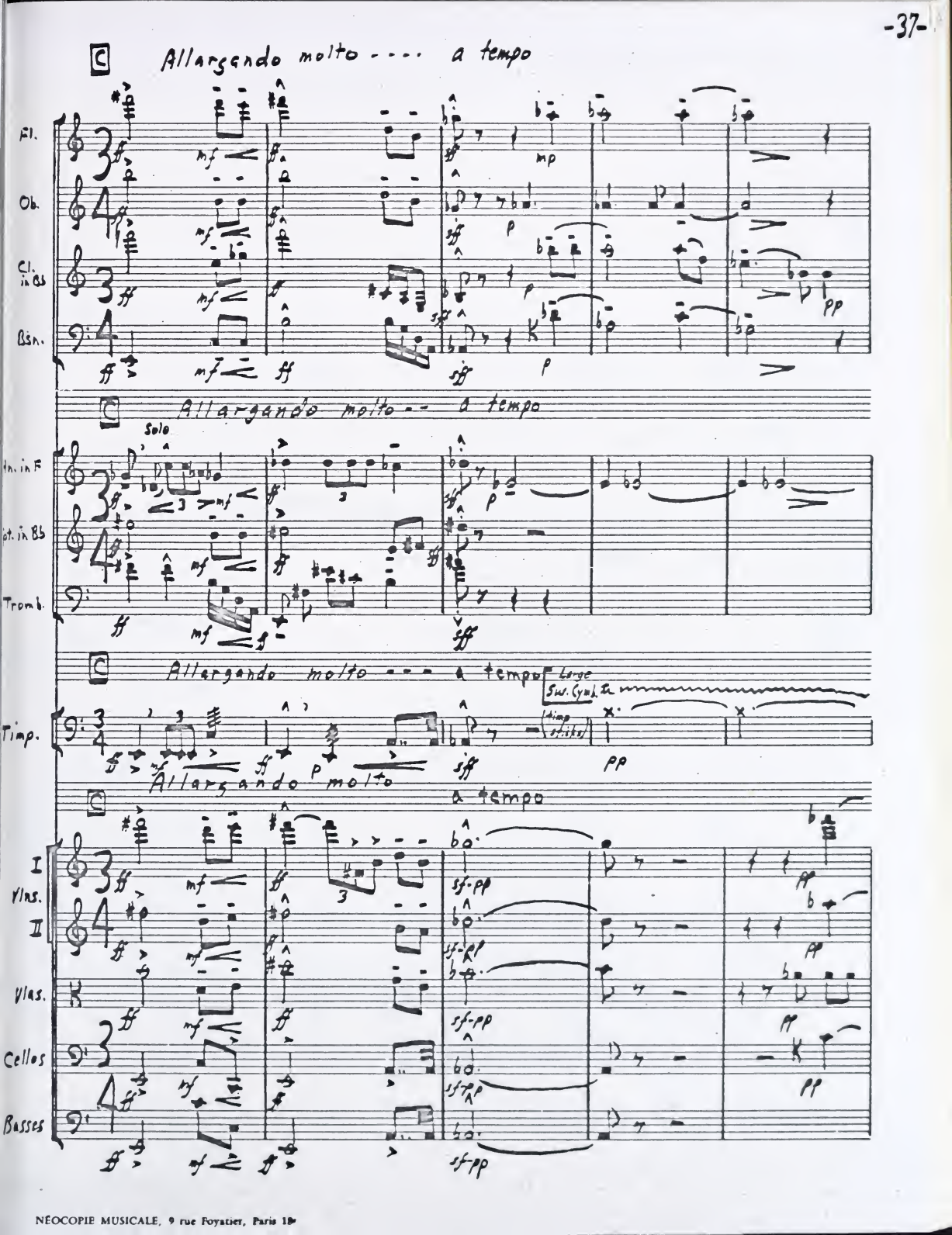
II

NÉOCOPIE MUSICALE, 9 rue Foyatier, Paris 18e

A
Fl.
Ob.
Cl. in Ob
Bsn
Solo
Horn in F
Trombone
I Vlns.
II
Vlas
Cellos
Basses
pizz.

B
Fl.
Ob.
Cl. in Bb
Bsn.
dim.
mf
pp
p
B
Hn. in F
Tpt. in Bb
Tromb.
Solo
dim.
mf
cresc.
I
Vlns.
II
Vlas.
Cellos
Basses
arco
tr.

NÉOCOPIE MUSICALE, 9 rue Foyatier, Paris 18e

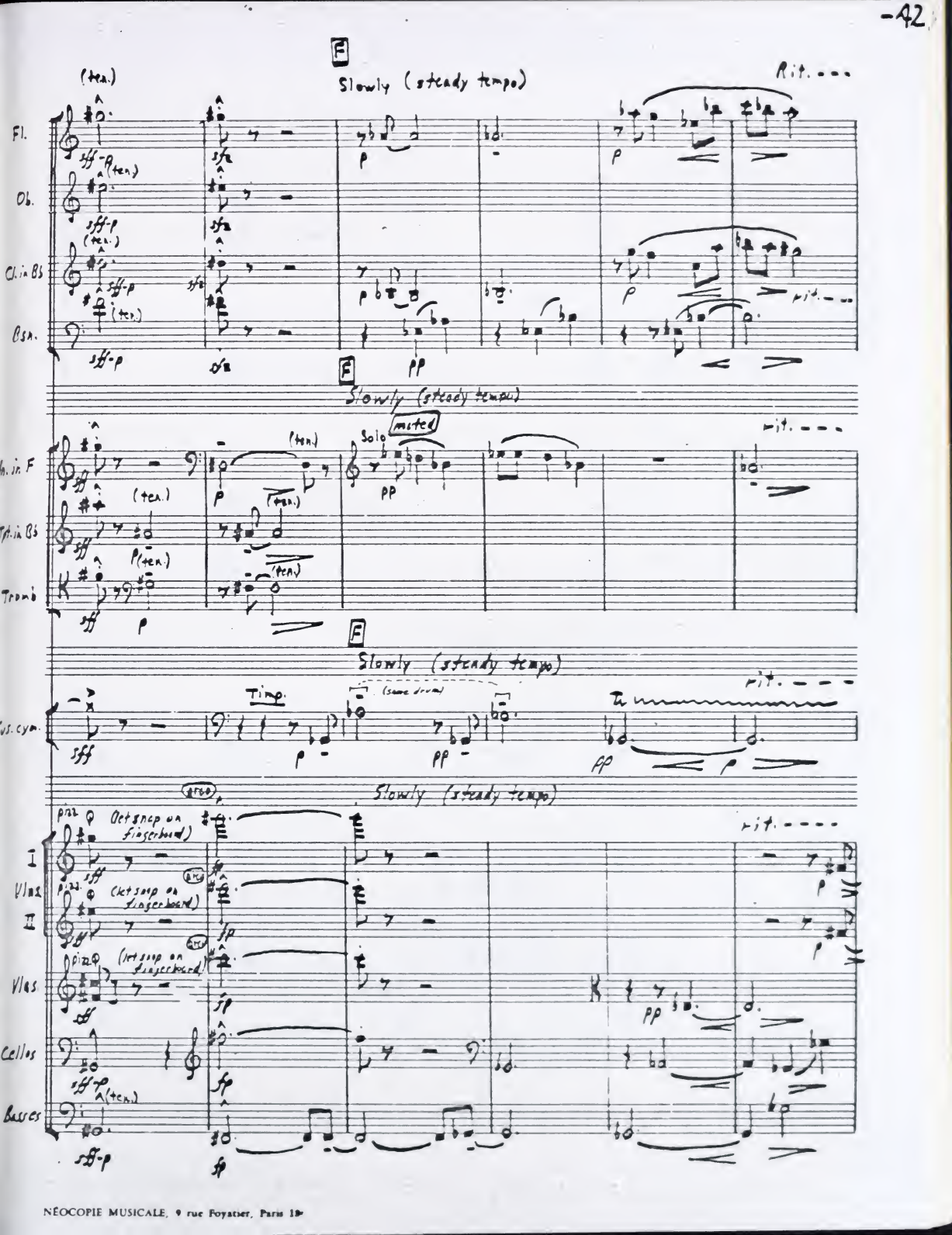

C Allargando molto .... a tempo
Fl.
Ob.
Cl. in Bb
Bsn.
C Allargando molto -- a tempo
Solo
Hn. in F
Pt. in Bb
Tromb.
C Allargando molto --- a tempo
Large Sus. Cymb.
Timp.
Allargando molto
C a tempo
I Vlns.
II
Vlas.
Cellos
Basses

D
Fl.
Ob.
Cl. in Bb
Bsn.
Solo
Hn. in F
Sus. cym.
I Vlns
II
Vlas
Cellos
Basses

Fl.
Ob.
Cl. in Bb
Bsn.
Hn. in F
Tpt. in Bb
Sus. cym.
Violas
Cellos
Basses
Solo
poco rit.
mp
St. Mute
pp
Solo
mtd.
p
poco rit.
morendo
poco rit.
morendo
morendo

a tempo
E
Fl.
Ob.
Cl. in Bb
Bsn.
smp
pp
a tempo
E
Hn. in F
Tpt. in Bb
Tromb.
St. mute
Open
Solo
open
mp
cresc.
a tempo
E
I
Vlns.
II
Vla.
Cellos
Bass
Sul G
mp
cresc. poco a poco
cresc. poco a poco

cresc. sempre
Allargando molto
Fl.
Ob.
f cresc. sempre
Cl. in Bb
Bsn.
mf
f
ff
Allargando molto
cresc. sempre
solo
Hn. in F
Tpt. in Bb
Trom b.
mf
f
cresc. sempre
solo
ff
Allargando molto
Timpani
[Snare drum]
Tri.
Perc.
p
mf-p
sf-p
crescmolto
Sus. Cym.
ff
p
cresc. sempre
Allargando molto
I
Vlns.
II
Vlas.
Cellos
Basses
f
cresc. sempre
ff


F
Slowly (steady tempo)
Rit. . . .
(ten.)
Fl.
Ob.
Cl. in Bb
Bsn.
sff-p (ten.)
sfz
p
pp
F
Slowly (steady tempo)
Solo
muted
Hn. in F
Tpt. in Bb
Tromb
(ten.)
F
Slowly (steady tempo)
Timp.
(same drum)
Sus. cym.
sff
pp
Slowly (steady tempo)
arco
pizz.
(let snap on fingerboard)
I Vlns
II Vlns
Vlas
Cellos
Basses
sff-p
sfp
pp

G
Fl.
Ob.
Cl. in Bb
Bsn.
Solo
p
mp
(sub.) pp
Solo
p
G
Open
pp
As at first
G
I
Vlns.
II
Violas
Cellos
Basses
pp
Sul G
pp (sub.)
pp (sub.)
pp (sub.)
pp

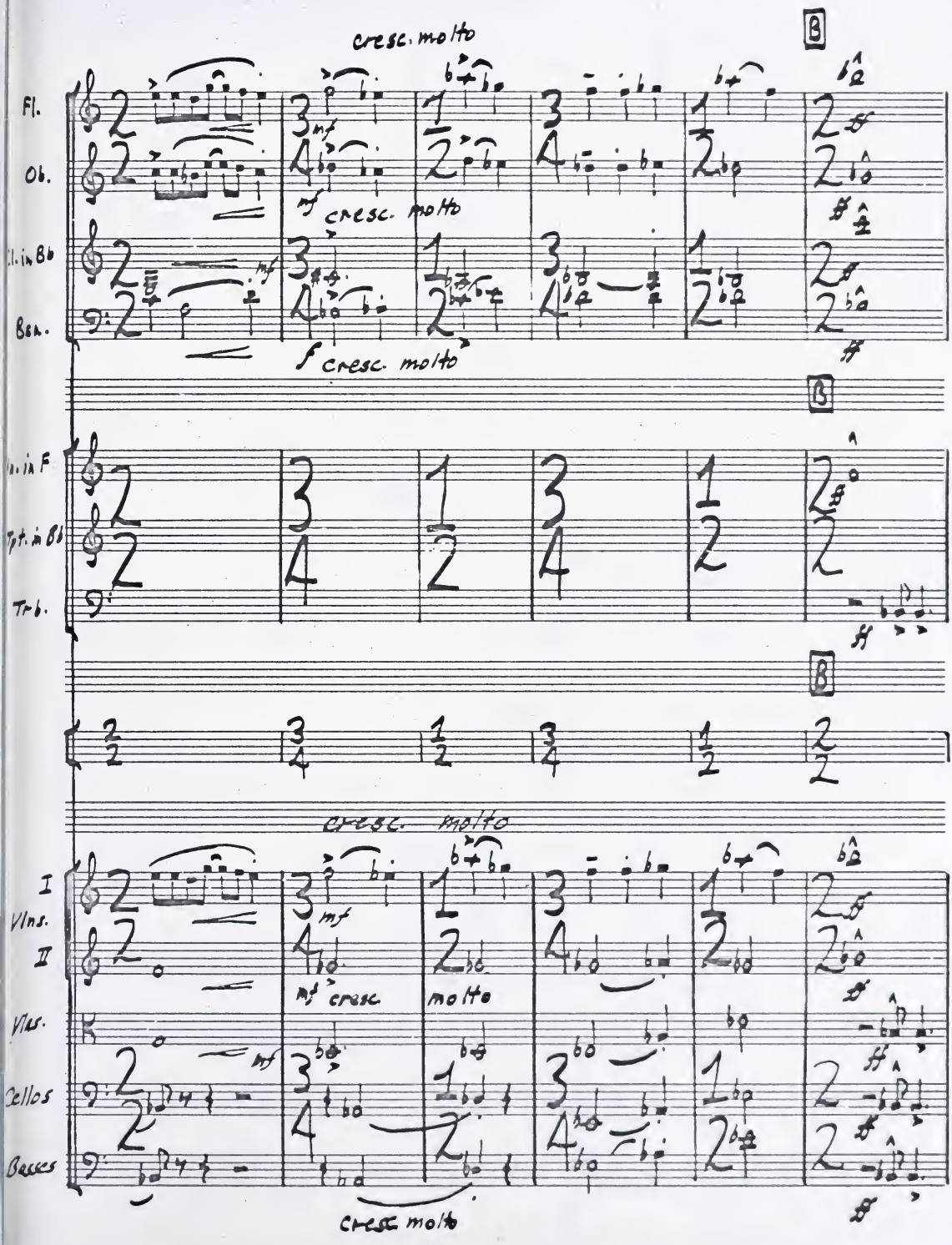
Fl.
Ob.
Cl. in Bb
Bsn.
Tempo giusto (don't drag)
(lead brass)
Hn. in F
Tpt. in Bb
Tromb.
mp
Tempo giusto (don't drag)
I Vlns.
II
Vlas.
Cellos
Basses
mf
pizz.
p
dim. poco a poco

mp dim. al fine pp
dim. al fine pp
dim. al fine
dim. al fine pp
pizz.
p pp
p pp
p pp
[5:15]

III
(d=ca. 88)
Fast and light
(♩=♩)
Flute
Oboe
Clarinet in Bb
Violins I
Violins II
Violas
Cellos
Basses
Fl.
Ob.
Cl. in Bb
Vlns. I
Vlns. II
Vlas.
(on the strings)
(on the strings)

Fl.
Ob.
Cl. in Bb
Bsn.
Horn in F
Tpt. in Bb
Trom b.
I
Vlns.
II
Vlas.
Cellos
Basses
cresc.

Fl.
Ob.
Cl. in Bb
Bsn.
Hn. in F
Tpt. in Bb
Trmb.
Perc.
Sn. Dr. Rim
A
pizz.
(let snap)
I
Vlns.
II
Vlas
Vlcs
Basses
arco
sfff
mp


cresc. molto
B
Fl.
Ob.
Cl. in Bb
Bsn.
mf
cresc. molto
f cresc. molto
B
Hn. in F
Tpt. in Bb
Trb.
ff
B
cresc. molto
I
Vlns.
II
Vlas.
Cellos
Basses
mf
mf cresc.
molto
cresc molto
ff

Fl.
Ob.
.in Ob
Bsn.
.in F
.in B♭
romb.
timp.
hard sticks
I
Vlns.
II
Vlas.
ellos
ssos

Fl.
Ob.
Cl. in Bb
Bsn.
Hn. in F
Tpt. in Bb
Stopped
St. in vib.
(simile)
I
Vlns.
II
Vlas.
Cellos
Basses
lightly

C
sempre cresc
Fl.
Ob.
in Bb
Bsn.
fp cresc. poco a poco
mp
C
Boldly
in F
in Bb
Tb.
++ sim
Open
sf
fp cresc. poco a poco
mp sempre cresc.
C
I
Vlns.
II
Vlas.
ellos
asses
Boldly
sf
f cresc.

cresc. molto
Fl.
cresc. molto
Ob.
Cl. in Bb
Bsn.
cresc. molto
Hn. in F
cresc.
f
Tpt. in Bb
Trb.
cresc.
f
Solo
Timp.
(hard stick)
I
Vlns
II
Vlas
Cellos
Basses

Fl.
Ob.
Cl. in Bb
Bsn.
Hn. in F
Tpt. in Bb
Tromb.
Timp.
I
Vlns.
II
Vlas.
Cellos
Basses
Open
Open

D
Solo
(slight accel. →)
mp slowing
Fl.
Ob.
Cl. in Bb
Bsn.
pp
D
Hn. in F
Tpt. in Bb
Tr b.
pp
D
(slight accel. →)
I
Vlns.
II
Vlas.
Cellos
Basses
pp

Faster, but not rushed
Fl.
Faster, but not rushed
Vlns.
Cellos
Basses
p
Fl.
f
Cup mute
Cup mute
mp
mp
I
Vlns.
II
Vlns.
Cellos
Basses
pp
cresc.
cresc.
cresc.
mf
mf
mf
mf

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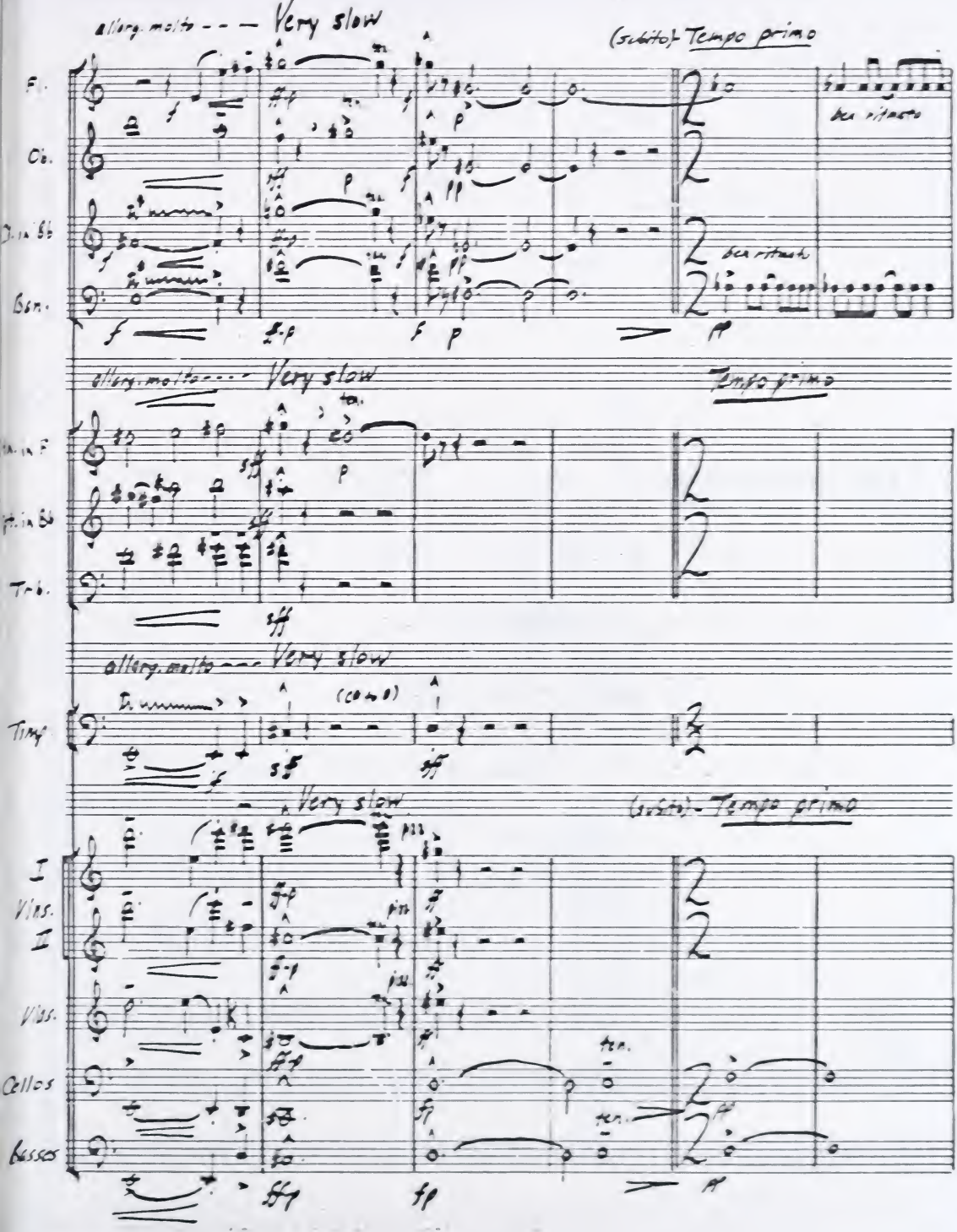
Fl.
Ob.
Bsn.
Solo
cresc.
sub.
Open
Trb.
I
II
Vlns.
Vlas.
pizz.
arco

E
toca
Fl.
Ob.
Cl. in Bb
Bsn.
cresc.
mp
fp
sfp
sf
Hn. in F
Tpt. in Bb
Tromb.
muted
Str. muted
ord.
I
Vlns.
II
Vlas.
Cellos
Basses
ff

morendo
Open
in F
in B♭
b.
p
pp
open
p morendo
pp
singing
I
Vlns.
II
las.
llos
sses
f
p

cresc. poco a poco
poco more.
Cor in F
mp
I
Vlns.
II
Vlas.
Cellos
Basses
cresc. poco a poco
cresc. poco a poco
poco more.
cresc. poco a poco

G
Allargando poco a poco
cresc. molto
Fl.
Ob.
inCl.
sn.
mf
cresc. molto
p sub.
marc.
f
p sub.
G
Allargando poco a poco
inF
inBb
b.
mf
marc.
p sub.
fp
fp
marc.
mp
mp
G
Allargando poco a poco
soft sticks
Tu
tu
mp
pp
p sub.
I
II
Vlcs.
Cbs.
fag.
mf
cresc. molto
p sub.
p sub.
p sub.
p sub.
Allargando poco a poco


allerg. molto - - - Very slow
(subito) Tempo primo
Fl.
Cb.
Cl. in Bb
Bsn.
allerg. molto - - - Very slow
Tempo primo
Hn. in F
Tpt. in Bb
Trb.
allerg. molto - - - Very slow
Timp.
Very slow
(subito) - Tempo primo
I
Vlns.
II
Vlas.
Cellos
Basses

Fl.
Ob.
in Bb
Bsn.
mp
H
cresc.
Fl.
Ob.
in Bb
Bsn.
cresc.
cresc.
K
in F
in Si
Tromb.
sfz
sfz
p
sfz
I
II
I
p

Fl.
Ob.
Cl. in Bb
Bsn.
mf
mf
mf
mf
n. in F
pt. in Bb
Trb.
(Open)
cresc.
(St. mt.)
f
p
cresc.
I
Vlns.
II
Vlas.
Cellos
Basses
pizz.
pizz.
mf
mf
mf
mf
mf

I
Fl
Cb
Cl in Bb
Bsn
cresc. molto
cresc. molto
cresc. molto
cresc. molto
Solo
Open
Trpts in Bb
Trmbs
cresc. molto
Timpani
Vlns
cresc. molto
cresc. molto
Vcles
Basses
cresc molto

cresc molto
Fl.
Ob.
Cl. in Bb
Bsn.
cresc.
molto
cresc. molto
Hn. in F
Tpt. in Bb
Trb.
St. mute
cresc. molto
Perc
Sus. cym.
mp
hit wooden end of stick
Tamb
I Vlns.
II
Vlas.
Cellos
Basses
arco
mp
cresc.
molto
mp
cresc. molto

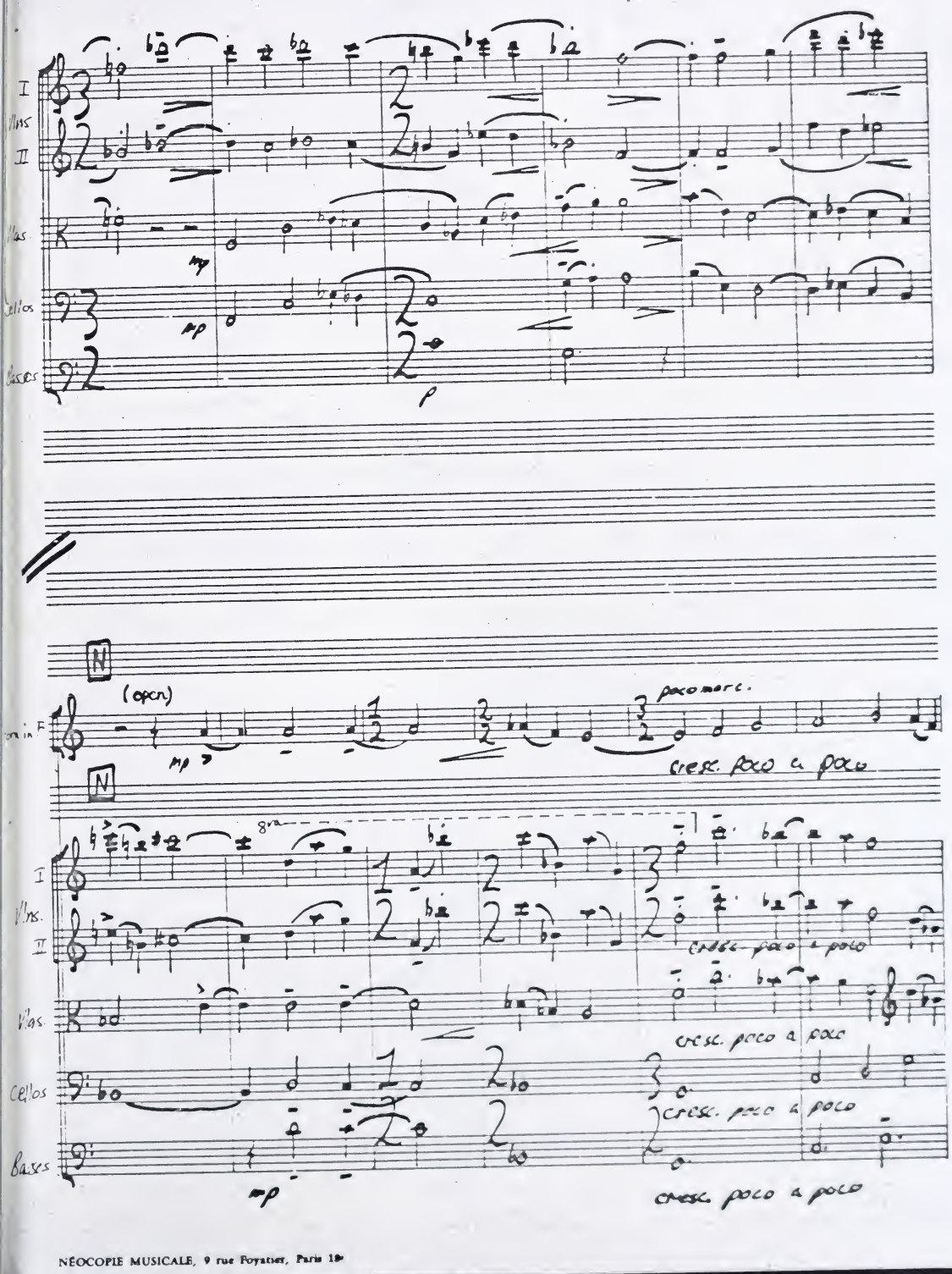
K
Fl.
Cl.
Cor.
Bsn.
Timp.
Vlns.
Vcs.
Bass

Scherzando
Fl.
Ob.
Cl. in Bb
Bsn.
Hn. in F
Trpt. in Bb
Trb.
Bass Drum
brushes on snare
Perc.
Scherzando
I
Vlns.
II
Vlas.
Cellos
Basses
pizz.
arco
sfz
p
mf
ff
sf
sfp
lightly

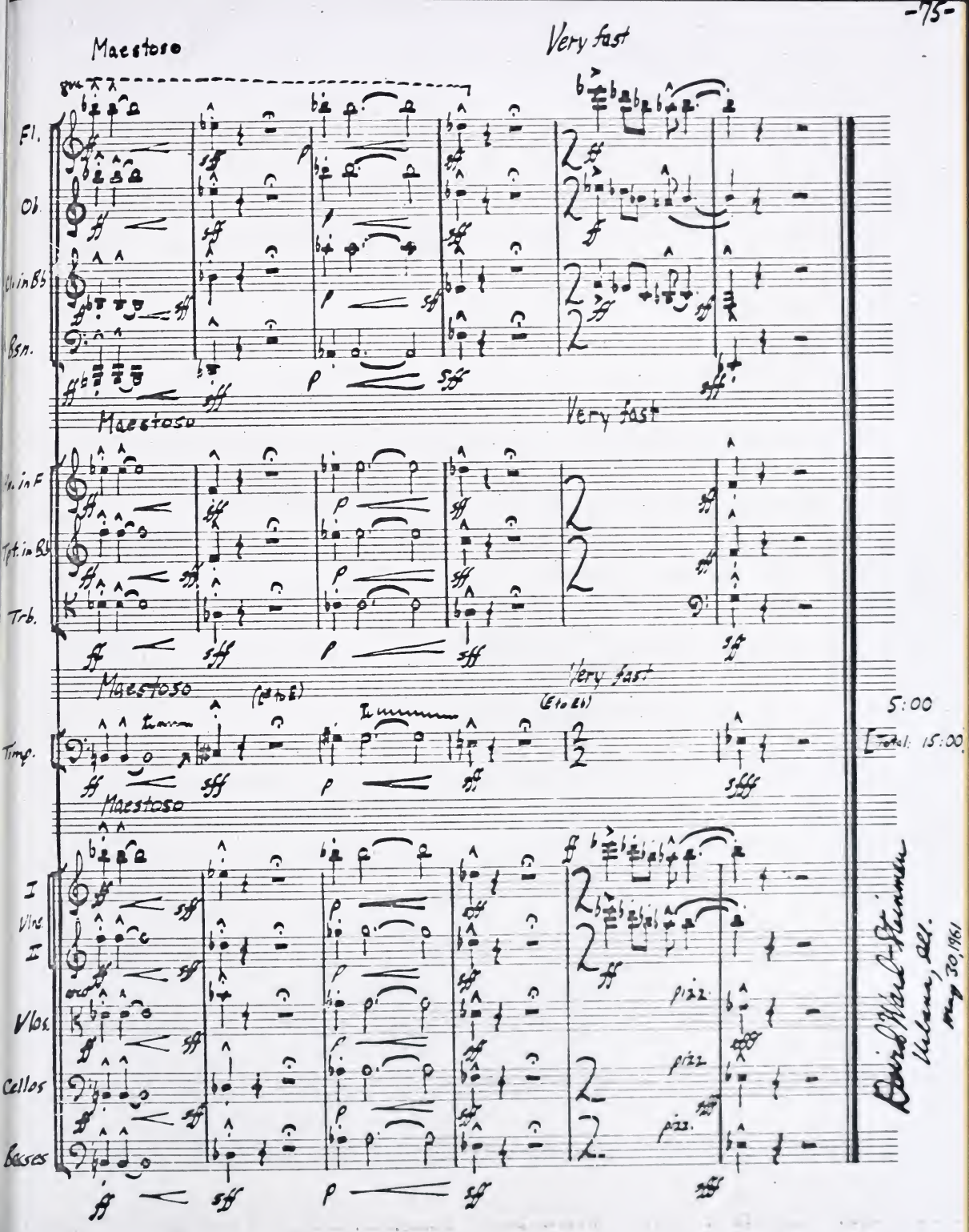
(♪=♪)
Fl.
Ob.
in Bb
Bsn.
cresc
mp cresc.
in F
pt. in Bb
Trb.
solo
1st. solo
cresc.
mp
cresc.
Dr.
(brushes)
mf
(♩.=♪)
I
Vlns.
II
Vlas.
Vcs.
Bass
arco
pizz.
mp
mf

(♪=♪)
cresc molto
Fl.
Ob.
Cl. in Bb
Bsn.
cresc molto
(open)
cresc. molto
Hn. in F
Tpt. in Bb
Trb.
mf
cresc. molto
ff
Sn. Dr. rim
center
Timpani
Perc
sf
sf
p
ff
sfp
(motto)
pizz.
arco
I
Vlns.
II
Vlas.
Cellos
Basses
f
sfz
(al sngl)
(pizz)
sfff

M
Fl.
Co.
in B♭
Bsn.
Solo
M
M
I
Vlns
II
Vlc.
arco


I
Vlns
II
Vlas.
Cellos
Basses
mp
p
N
(open)
mp
poco more.
cresc. poco a poco
8va
I
Vlns.
II
Vlas.
Cellos
Basses
mp
cresc. poco a poco
cresc. poco a poco
cresc. poco a poco
cresc. poco a poco

allargando poco a poco
Allarg. molto
Fl.
Ob.
Cl. in Bb
Bsn.
Hn. in F
Tpt. in Bb
Trb.
Timp.
I
Vlns.
II
Vlas.
Cellos
Basses
cresc. molto
allargando poco a poco
Allarg. molto


Maestoso
Very fast
Fl.
Ob.
ClinBb
Bsn.
Hn. in F
Tpt. in Bb
Trb.
Timp.
I Vlns
II
Vlas.
Cellos
Basses
pizz.
5:00
Total: 15:00
Edward Ward-Steinman
Urbana, Ill.
May 30, 1961

Kitabxana

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